#### REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

At

#### ST. JOHN'S REGIONAL MEDICAL CENTER

2727 McClelland Boulevard Joplin, Missouri 64804 (417) 625-2007

EPA ID Number: MOD076262500

On

May 4-5, 2011

By

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region VII
Environmental Services Division

#### 1.0 INTRODUCTION

At the request of the Air and Waste Management Division, I conducted a Resource Conservation and Recovery Act (RCRA) compliance evaluation inspection (CEI) at St. John's Regional Medical Center (hereafter SJMC) located in Joplin, Missouri, on May 4-5, 2011. The CEI was conducted under the authority of Section 3007(a) of RCRA, as amended. During the CEI, I collected the information and data necessary to determine compliance with the applicable regulatory and statutory requirements. The inspection report and attachments present the results of the CEI. The CEI was conducted as a Level B Multi-Media Inspection and the *Region 7 Multimedia Screening Checklist* is included as Attachment 1. On May 22, 2011, a tornado struck SJMC causing significant damage. SJMC was destroyed and their patients are being treated at multiple medical facilities located throughout the region. As of May 31, 2011, SJMC operates a temporary tent hospital located across the street from their wrecked building.

#### 2.0 PARTICIPANTS

#### SJMC:

Kevin Fitzpatrick, General Manager of Environmental Services Michael Wardlow, Corporate Responsibility Manager Spencer Dobbs, Safety Officer Randy Bechtel, Director of Pharmacy Sarah Boyd, Pharmacy Clinical Coordinator Suzanne Skinner, Pharmacy Tech II Tracey Reed, Supplies Processing Distribution/Central Sterile Manager Marilyn Endicot, Director of Materials Management
Tom Thiele, Microbiology Supervisor
Connie Wilkins, Administrative Lab Director
Karen Adkins, Clinical Lab Educator/Safety Leader
Denise Lucas, Histology Coordinator
Nora Cannon, Director of Imaging
Gregory Dye, Facilities
Gerald Lawrence, Facilities Supervisor
Randy Wrensch, Biomedical Services
Preston Myers, Registered Nurse
Karen Wells, Registered Nurse
Chris Newby, Registered Nurse
Jodi Zengel, Registered Nurse/Clinical Supervisor

U.S. Environmental Protection Agency (EPA): Michael J. Martin, Environmental Scientist

#### 3.0 INSPECTION PROCEDURES

Upon my arrival at SJMC on May 4, 2011 (at 10:15 a.m.), I met with Messrs. Fitzpatrick, Wardlow, and Dobbs. I presented them with my EPA credentials and explained the purpose and procedures of the inspection. I presented them with a copy of RCRA section 3007(a), which provides inspection authority. I next explained my need to collect accurate information and presented them with a copy of Title 18 U.S. Code, Sections 1001 and 1002. They were made aware of their confidentiality rights and were informed that a *Confidentiality Notice* would be provided at the end of the inspection to make or not to make any claims. Messrs. Fitzpatrick, Wardlow, and Dobbs acted as the official facility representatives during the course of the inspection.

The inspection consisted of a discussion of facility operations, waste generation and waste management, a review of waste management records, and a visual inspection of the waste generation and management areas. See attachments 2 and 3 for the Facility Layout and Map. I conducted a visual inspection of the following areas at SJMC:

Pharmacy
Histology Lab
Microbiology Lab
Central Sterile
Biomedical Services
Hazardous Waste Storage Area

Paint Shop

Radiology
Surgery
Patient Medical Care (4<sup>th</sup> and 5<sup>th</sup> Floors)
Copy Center
Waste Formalin Storage Area (Shipping Dock),
Biohazardous Waste Storage Cage (Shipping Dock)

Universal Waste Storage Area

Information collected during the inspection is documented on the *Missouri Department of Natural Resources* (MDNR) *Small Quantity Generator Inspection Checklist* (see attachment 4). Document photocopies and photographs were additionally collected as inspection documentation (see attachments 1-23 and photos 1-27). At the conclusion of the inspection, I summarized my findings and recommendations with Messrs. Fitzpatrick, Wardlow, and Dobbs. Additional SJMC personnel were in attendance at the exit briefing. See attachment 5 for the Exit Briefing Attendance List. I provided Mr. Dobbs with a *Confidentiality Notice*, which he signed, indicating no confidentiality claims were made by the SJMC (see attachment 6). I provided Mr. Dobbs with a *Receipt of Documents and Samples* and a *Notice of Violation* (NOV), which he signed as acknowledgement of receipt (see attachments 7 and 8).

The following inspection documents and compliance assistance handouts were left with SJMC:

Confidentiality Notice (Top page of the completed carbonless transfer set)

Receipt for Documents and Samples (Top page of the completed carbonless transfer set)

Notice of Violation (Top page of the completed carbonless transfer set)

Instructions for Responding to a Notice of Violation (EPA Handout)

Security Awareness (EPA Handout)

Commercial Motor Vehicle Transportation Security Planning (EPA Handout)

U.S. EPA Small Business Resources (EPA Handout)

Mismanagement of Laboratory Waste (EPA Handout)

How to Prepare Hazardous Waste Manifests (EPA Handout)

Does Your Business Generate Hazardous Waste? (MNDR Fact Sheet)

Hazardous Waste in Missouri (MNDR Fact Sheet)

Hazardous Waste Generator Status Guidance (MNDR Fact Sheet)

Hazardous Waste Satellite Accumulation (MNDR Fact Sheet)

Waste or Product Determination Guidance (MNDR Fact Sheet)

Is Your Drug Waste Also Hazardous Waste? (MNDR Fact Sheet)

Fluorescent Lamps (MNDR Fact Sheet)

The Universal Waste Rule in Missouri (MNDR Fact Sheet)

Aerosol Cans (MNDR Fact Sheet)

Solvent-Contaminated Rags (MNDR Fact Sheet)

Small Quantity Generator Inspection Checklist (MNDR Checklist)

#### 4.0 FINDINGS AND OBSERVATIONS

#### 4.1 Facility Information and Operations

SJMC was a Level 2 Trauma Center that offered services in cardiology, cancer care, orthopedics, neurosciences, obstetrics, and pediatrics. SJMC had a total of 367 licensed beds and was staffed by 1,856 employees. Administration office hours were 7:00 a.m. to 5:00 p.m., Monday through Friday. Emergency care was provided 24 hours a day/7days a week.

#### **4.2 RCRA Status**

SJMC had not been inspected for RCRA compliance prior to this inspection. According to the EPA RCRA Handler Information Report, SJMC operates as a Small Quantity Generator (SQG) of hazardous waste. See attachment 9 for the EPA RCRA Handler Information Report. I asked Messrs. Fitzpatrick and Wardlow to review the EPA RCRA Handler Information Report, which I provided to them during the inspection. They indicated the following changes: (1) their zip code changed from 648041 to 64804, (2) their site contact changed from Don Gabriel to Mr. Dobbs, and (3) their owner changed from Catholic Health Initiatives (303) 298-9100 to the Sisters of Mercy (314) 579-6100. I asked Mr. Wardlow if SJMC had notified the MDNR of the updated changes to their facility information. Mr. Wardlow stated "No." I informed Mr. Wardlow that SJMC will need to submit an updated notification to the MDNR. SJMC generates an average of 112 pounds of known hazardous waste (waste stain) per month and accumulates between 220 pounds and 2,200 pounds of known hazardous waste (waste stain) on-site prior to disposal. Based on the amount of known hazardous waste (234 pounds of waste stain) accumulated on-site and my review of their past three years' uniform hazardous waste manifests, I determined that the SJMC operated as a SQG of D001 and F003 hazardous wastes. See attachment 10 for the 2009-2011 Uniform Hazardous Waste Manifests. In addition, SJMC operated as a small quantity handler of universal waste.

#### 4.3 Facility Waste Management and Streams

Pharmacy Waste - Wastes generated at the Pharmacy consist of tablet capsules, oral liquids, and contents of partially used medications in vials and syringes. Waste pharmaceuticals generated at the Pharmacy include Gemzar (Gemcitabine), Cytovene (Ganciclovir), Mitomycin, Eloxatin (Oxaliplatin), Taxol (Paclitaxel), Cisplatin, Velcade (Bortezomib), Hycamtin (Topotecan), Camptostar (Irinotecan), and Cyclophosphamide. SJMC's last off-shipment of waste pharmaceuticals (waste Mitocycin C and waste Cisplatin) was on March 12, 2010. Veolia (Port Arthur, Texas) disposed of their pharmacy waste as U010 listed hazardous waste. See attachment 10 for the March 12, 2010 Uniform Hazardous Waste Manifest. At the time of the inspection, Mr. Betchel stated that their pharmacy waste (waste tablet capsules, oral liquids, and contents of partially used medications in vials and syringes) are disposed with biohazardous waste (see photos #3 and #4). Stericycle (Springfield, Missouri), disposes of SJMC's biohazardous waste as non-hazardous waste. I asked Mr. Betchel and Ms. Boyd if SJMC had conducted a hazardous waste determination on their pharmacy waste prior to disposal with biohazardous waste. Mr. Betchel and Ms. Boyd both stated "No." I informed Mr. Betchel and Ms. Boyd that SJMC must conduct a hazardous waste determination on their pharmacy waste. The generation rate of their pharmacy waste was not determined at the time of the inspection. An associated violation is noted in Section 5.0.

Reverse Distributor Pharmaceuticals - Unopened/unused pharmaceuticals generated from patient floors and from the Pharmacy are sent to EXP Pharmaceutical Services Corporation (Freemont, California) for reuse and/or recycling on a monthly basis. The pharmaceuticals slated for reverse distribution were stored in two by two foot plastic containers located in the Pharmacy. SJMC's reverse distributor reports were not available for review, due to the Records Management Coordinator being off-site. At the time of the inspection, Ms. Boyd stated that some partially used pharmaceuticals (generated from patient floors) are sent to the Pharmacy and collected with the pharmaceuticals slated for reverse distribution. At the Pharmacy, I observed four storage containers of pharmaceuticals for reverse distribution. From my observation, the containers appeared to store only unused pharmaceuticals (see photos #1 and #2). I asked Ms. Boyd if SJMC had conducted a hazardous waste determination on the partially used pharmaceuticals that were sent to EXP. Ms. Boyd stated "No." I informed Ms. Boyd that SJMC must conduct a hazardous waste determination on their partially used pharmaceuticals. The generation rate of their partially used pharmaceuticals was not determined at the time of the inspection. An associated violation is noted in Section 5.0.

Damaged, Partially Used, and Patient Contacted Pharmaceuticals - At the time of the inspection, Mr. Myers and Ms. Wells stated that damaged, partially used, and patient contacted pharmaceuticals (pills, ointments, creams, tablets, nicotine patches, aerosol inhalers, etc.) generated from patient floors are disposed with biohazardous waste and/or sent to the Pharmacy for disposal. The Pharmacy disposes of the waste pharmaceuticals with biohazardous waste and/or sends it to EXP for disposal or possible reuse. I asked Mr. Myers if SJMC had conducted a hazardous waste determination on their damaged, partially used, and patient contacted pharmaceuticals prior to disposal with biohazardous waste. Mr. Myers stated "No." I asked Mr. Bechtel and Ms. Boyd if SJMC had conducted a hazardous waste determination on their damaged, partially used, and patient contacted pharmaceuticals (sent to the Pharmacy from patient floors) prior to disposal with biohazardous waste. Mr. Bechtel and Ms. Boyd both stated "No." I informed Messrs. Myers and Bechtel and Ms. Boyd that a hazardous waste determination must be conducted on their damaged, partially used, and patient contacted pharmaceuticals. The generation rate of their damaged, partially used, and patient contacted pharmaceuticals was not determined at the time of the inspection. An associated violation is noted in Section 5.0.

Chemotherapy Waste - SJMC generates chemotherapy waste (dispensing equipment, intravenous bags, syringes, tubing, gloves, gowns, masks, and cleanup debris) from their drug preparation and administrating activities. Ms. Wells stated that their chemotherapy waste is collected in yellow 5-gallon accumulation containers and is disposed by Housekeeping. Mr. Fitzpatrick stated that Housekeeping collects the chemotherapy waste and manages it as biohazardous waste. I asked Messrs. Fitzpatrick and Wardlow if SJMC had conducted a hazardous waste determination on their chemotherapy waste prior to disposal as biohazardous waste. Messrs. Fitzpatrick and Wardlow both stated "No." I informed Messrs. Fitzpatrick and Wardlow that a hazardous waste determination must be conducted on their chemotherapy waste. The generation rate of their chemotherapy waste was not determined at the time of the inspection. An associated violation is noted in Section 5.0.

<u>Chemotherapy Hood Filters</u> - SJMC generates four spent hood filters per year from their chemotherapy drug preparation activities. ENV (Joplin, Missouri) services the one hood that is used for chemotherapy drug preparation. Mr. Wardlow stated that ENV disposes of their spent hood filters off-site. I asked Mr. Wardlow if SJMC had conducted a hazardous waste determination on their spent chemotherapy hood filters prior to being taken off-site by ENV. Mr. Wardlow stated that he was not sure. I informed Mr. Wardlow that SJMC must conduct a hazardous waste determination on their spent chemotherapy hood filters. An associated violation is noted in Section 5.0.

Clinical Waste - To aid in the prevention and control of methicillin-resistant Staphlyococcus aureus (MRSA) infection in the hospital, diagnostic tests are conducted on patients whom were admitted and discharged. SJMC uses an agar plate method (Spectra MRSA method) and a polymerase chain reaction method (Xpert MRSA method) for the rapid detection of MRSA. See attachment 11 for the Spectra MRSA Detection Method material safety data sheet (MSDS). See attachments 12 and 13 for the Xpert MRSA Detection Method MSDS and Analytical Method. Mr. Thiele stated that their Spectra MRSA and Xpert MRSA wastes are collected with biohazardous waste (see photos #11, #12, and #19). From my review of the MSDS, their Spectra MRSA waste appears to be non-hazardous. From my review of the MSDS, it appears that their Xpert MRSA waste would exhibit the characteristic of corrosivity (D002). SJMC generates three to four cartridges of Xpert MRSA waste per day. I asked Mr. Thiele if SJMC had conducted a hazardous waste determination on their Xpert MRSA waste prior to disposal with biohazardous waste. Mr. Thiele stated "No." I informed Mr. Thiele that SJMC must conduct a hazardous waste determination on their Xpert MRSA waste. An associated violation is noted in Section 5.0.

Waste Stain - SJMC generates an average of 112 pounds of waste stain per month from their histology activities (see photo #10). Veolia Technical Solution (Port Arthur, Texas) disposes of their waste stain as D001 and F003 hazardous waste. At the Hazardous Waste Storage Area, I observed 28 one gallon hazardous waste storage containers of waste stain in storage (see photo #5). The storage containers were in good condition, closed, and labeled with the words "Hazardous Waste." However, I observed one hazardous waste storage container of waste stain not marked per the Department of Transportation (DOT) requirements, not marked with the date of accumulation, and not marked with the words "Hazardous Waste" (see photo #6). I asked Ms. Adkins if weekly inspections were conducted on their hazardous waste storage containers. Ms. Adkins stated "Yes" and provided me with their inspection records for review. From my review of their inspection records, it appeared that inspections records were not maintained from September 20, 2010 to Present. I asked Ms. Adkins if daily inspections of their Hazardous Waste Storage Area (waste handling area subject to spills) were conducted. Ms. Adkins stated "No." I informed Ms. Adkins that the one hazardous waste storage container of waste stain (located at the Hazardous Waste Storage Area) must be marked per the DOT requirements, marked with the date of accumulation, and marked with the words "Hazardous Waste." In addition, I informed Ms. Adkins that their weekly hazardous waste inspection records must be maintained and daily inspections of the Hazardous Waste Storage Area must be conducted. Associated violations are noted in Section 5.0.

Waste Formalin - SJMC generates an average of 136 pounds of waste formalin per month from their pathology activities. Veolia (Port Arthur, Texas) disposes of their waste formalin as non-hazardous waste. Ms. Lucas stated that their waste formalin is non-hazardous based on process knowledge. See attachment 14 for the Formalin MSDS. From my review of the MSDS, their waste formalin appears to be non-hazardous. At the Shipping Dock, I observed 29 one gallon storage containers of waste formalin in storage (see photos #15 and #16). The containers were in good condition, closed, and labeled as "Non-Hazardous Waste." The management of the containers appeared to be adequate. I reviewed SJMC's management of their waste formalin and no violations were noted.

Sterilization Waste - SJMC generates spent sterilization indicator tape and spent integrators from the sterilization of surgical instruments and equipment (see photos #8 and #9). Ms. Reed stated that their spent sterilization indicator tape and spent cartridges are disposed in the general trash. SJMC generates the following sterilization wastes: (1) two to three rolls of spent 3M 1228 indicator tape per month, (2) twenty spent 3M 1248 chemical indicator strips per day, (3) 120 spent 3M Comply 1243 integrators per day, (4) four to six rolls of spent 3M Comply 1222 indicator tape per day, and (5) twenty spent Steris LCC008 indicator strips per day. See attachments 15, 16, 17, 18, and 19 for the indicator tape and integrator MSDS. From my review of the MSDS, it appears that their spent 3M 1248 chemical indicator strips, spent 3M Comply 1243 integrators, spent 3M Comply 1222 indicator tape, and spent Steris LCC008 indicator strips are all non-hazardous. From my review of the MSDS, it appears that their spent 3M 1228 indicator tape would exhibit the toxicity characteristic leaching procedure characteristic of lead (D008). I asked Ms. Reed if SJMC had conducted a hazardous waste determination on their spent 3M 1228 indicator tape prior to disposal in the general trash. Ms. Reed stated "No." At the time of the inspection, Ms. Reed provided me with correspondence regarding the disposal of their spent 3M 1228 indicator tape. See attachment 20 for the 3M 1228 Indicator Tape Correspondence. From my review of the provided correspondence, I could not determine if SJMC's spent 3M 1228 indicator tape was RCRA hazardous or non-hazardous. I informed Ms. Reed that SJMC must conduct a hazardous waste determination on their spent 3M 1228 indicator tape. An associated violation is noted in Section 5.0.

<u>Biohazardous Waste</u> - SJMC's biohazardous waste consists of sharps, waste pharmaceuticals, MRSA waste, and chemotherapy waste (see photo #17). Stericyle (Springfield, Missouri) disposes of their biohazardous waste as non-hazardous waste. At time of the inspection, I determined that SJMC had not conducted a hazardous waste determination on their waste pharmaceuticals, MRSA waste, and chemotherapy waste (all disposed with biohazardous waste). Associated violations are noted in Section 5.0.

Barium Contrasting Media Waste - SJMC generates barium contrasting media waste (cups and containers) from their radiology activities. Ms. Cannon stated that their barium contrasting media is swallowed by the patient (as liquid or mixed with pudding) prior to conducting the radiological analysis. Ms. Cannon stated that any remaining barium contrasting media left in the drinking cups and/or pudding containers is disposed in the general trash. Ms. Cannon stated that their barium contrasting media waste is non-hazardous based on process knowledge. See attachment 21 for the Barium Sulfate MSDS. From my review of the MSDS, their barium contrasting media appears to be non-hazardous. I reviewed SJMC's management of their barium contrasting media waste and no violations were noted.

<u>Developer and Fixer Waste</u> - SJMC generates developer and fixer waste from one film developing unit on-site. Their developer/fixer waste is sent through a silver reclaimer prior to being discharged to the sanitary sewer (see photo #13). Safety Kleen (Springfield, Missouri) recycles their silver reclaimer unit quarterly. Ms. Cannon stated that their developer/fixer waste is non-hazardous based on process knowledge. See attachments 22 and 23 for the Developer and Fixer MSDS. From my review of the MSDS, their developer and fixer appear to be non-hazardous. I reviewed SJMC's management of their developer and fixer waste and no violations were noted.

Medical Film - Ms. Cannon stated that a majority of their radiological imaging is digital and no spent medical film or spent processing chemicals are generated from that process. Once a year, SJMC purges their old medical film and it is recycled by Safety-Kleen (Springfield, Missouri). At the Radiology Lab, I observed two 55-gallon storage containers of medical film (see photo #14). The containers were in good condition. The management of the containers appeared to be adequate. I reviewed SJMC's management of their medical film and no violations were noted.

<u>Lead Aprons</u> - SJMC generates four spent lead aprons per year from their radiological activities. Safety-Kleen (Springfield, Missouri) recycles their spent lead aprons. At the time of the inspection, I did not observe any spent lead aprons being accumulated on-site. I reviewed SJMC's management of their spent lead aprons and no violations were noted.

Lead Solder Waste- SJMC generates five to six lead solder contaminated rags per year for the cleaning of solder guns located at Biomedical Services. Mr. Wrensch stated that their lead solder contaminated rags are disposed in the general trash. Mr. Wrensch stated that their solder guns are wiped with a sponge (contained in the soldering unit) and/or wiped with a rag. Mr. Wrensch stated that their sponges are the original set and have not been replaced (see photos #24 and #25). I asked Mr. Wrensch if SJMC had conducted a hazardous waste determination on their lead solder contaminated rags prior to disposal in the general trash. Mr. Wrensch stated "No." I informed Mr. Wrensch that SJMC must conduct a hazardous waste determination on their lead solder contaminated rags. An associated violation is noted in Section 5.0.

<u>Lead-Acid Batteries</u> - SJMC generates two full 5 gallon storage containers of spent lead-acid batteries and alkaline batteries per month from the service of their biomedical equipment (see photos #26 and #27). At the Biomedical Services Department, I observed ten spent lead-acid batteries in storage (see photo #27). The management of the batteries appeared to be adequate. Call to Recycle (Atlanta, Georgia) recycles their spent lead-acid batteries. Their spent lead-acid batteries are being reclaimed per 40 CFR 266 Subpart G. I reviewed SJMC's management of their spent lead-acid batteries and no violations were noted.

<u>Universal Waste-Lamps</u> - SJMC generates universal waste-lamps from their re-lamping activities. Russell Benton Electric (Joplin, Missouri) recycles their universal waste-lamps. At the Universal Waste Storage Area (Electrical Closet), I observed 178 universal waste-lamps stored in open containers and not labeled with the words Universal Waste-Lamps," "Waste Lamps," or "Used Lamps" (see photos #20-#23). I asked Mr. Lawrence if he was aware of the length of time of accumulation of their universal waste-lamps. Mr. Lawrence stated that he was not aware of the length of time of their universal waste-lamps accumulation. I asked Mr. Lawrence if their personnel are provided with training on the proper management of universal waste. Mr. Lawrence stated "No." I informed Mr. Lawrence that their universal waste-lamps must be stored in closed containers, labeled with the words "Universal Waste-Lamps," "Waste Lamps," or "Used Lamps," and the earliest date of accumulation must be demonstrated. In addition, I informed Mr. Lawrence that their personnel who manage universal waste must be provided with training on the proper universal waste management. Associated violations are noted in Section 5.0.

<u>General Trash</u> - General trash includes empty housekeeping/cleaning containers, restroom wastes, lunch wastes, barium contrasting media waste (non-hazardous waste), spent 3M 1228 indicator tape (hazardous waste determination not conducted), and lead solder contaminated rags (hazardous waste determination not conducted). Allied Waste (Joplin, Missouri) disposes of their general trash.

#### 5.0 VIOLATIONS

#### 5.0.1. Hazardous Waste Determinations Not Conducted (NOV #1)

According to 10 CSR 25-5.262(1) incorporating 40 CFR 262.11, a hazardous waste determination must be made on all solid wastes. A hazardous waste determination had not been made on the following:

#### Pharmacy

- Pharmacy waste (tablet capsules, oral liquids, and contents of partially used medications in vials and syringes) disposed with biohazardous waste.
- Partially used pharmaceuticals (generated from patient floors) sent to EXP and/or disposed with biohazardous waste.
- Four spent chemotherapy hood filters generated per year.

#### Throughout the Hospital

- Damaged, partially used, and patient contacted pharmaceuticals (pills, ointments, creams, tablets, nicotine patches, aerosol inhalers, etc.) disposed with biohazardous waste.
- Chemotherapy waste (dispensing equipment, intravenous bags, syringes, tubing, gloves, gowns, masks, and cleanup debris) disposed with biohazardous waste.

#### Microbiology Lab

- Three to four spent cartridges of Xpert MRSA waste disposed with biohazardous waste per day (see photos #11, #12, and #19).

#### Central Sterile

- Six rolls of spent 3M 1222 indicator tape disposed in the general trash per week.

#### Biomedical Lab

- Five to six lead solder contaminated rags disposed in the general trash per year.

#### 5.0.2. Failure To Update Notification (NOV #2)

According to 10 CSR 25-5.262(2)3.B, hazardous waste generators must notify the MDNR of any updates to their notification of regulated hazardous waste activity. SJMC had not notified the MDNR of changes to their zip code, site contact, and owner of their facility.

### 5.0.3. Date Of Accumulation Not Marked On Hazardous Waste Storage Containers (NOV #3)

According to 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(4) referencing 40 CFR 262.34(a)(2), hazardous waste storage containers must be marked with the accumulation start date. The following hazardous waste storage container was not marked with the date of accumulation start date:

#### Hazardous Waste Storage Area

- One 1 gallon hazardous waste storage container of waste stain (see photo #6). This violation was corrected at the time of the inspection (see photo #7).

### 5.0.4. Hazardous Waste Storage Container Not Marked "Hazardous Waste" (NOV #4)

According to 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(4) referencing 40 CFR 262.34(a)(3), hazardous waste storage containers must be marked "Hazardous Waste." The following hazardous waste storage container was not marked:

#### Hazardous Waste Storage Area

- One 1 gallon hazardous waste storage container of waste stain (see photo #6). This violation was corrected at the time of the inspection (see photo #7).

#### 5.0.5. Weekly Hazardous Waste Inspection Records Not Maintained (NOV #5)

According to 10 CSR 25-5.262(2)(C)2.C(I) and (II) referencing 40 CFR 265.174, weekly inspections of hazardous waste storage containers must be conducted and inspection records must be maintained. Weekly hazardous waste inspections records were not maintained from September 20, 2010 to Present.

#### 5.0.6. Daily Inspections of Waste Handling Areas Not Conducted (NOV #6)

According to 10 CSR 25-5.262(2)2.C(II), daily inspections of waste handling areas subject to spills must be conducted. I asked Ms. Adkins if daily inspections of their Hazardous Waste Storage Area (waste handling area subject to spills) were conducted. Ms. Adkins stated "No."

## 5.0.7. The Length Of Time Of Universal Waste-Lamps Accumulation Not Demonstrated (NOV #7)

According to 10 CSR 25-16.273(1) incorporating 40 CFR 273.15(c), the length of time of universal waste accumulation must be demonstrated. I asked Mr. Lawrence if he was aware of the length of time of accumulation of the 178 universal waste-lamps stored at the Universal Waste Storage Area (Electrical Closet). Mr. Lawrence stated that he was not aware of the length of time of their universal waste-lamps accumulation.

#### 5.0.8. Universal Waste Management Training Not Provided (NOV #8)

According to 10 CSR 25-16.273(1) incorporating 40 CFR 273.16, employees who manage universal waste must be provided with training on the proper management of universal waste. I asked Mr. Lawrence if SJMC's personnel are provided with training on the proper management of universal waste. Mr. Lawrence stated "No."

#### 5.0.9. Universal Waste-Lamps Not Stored In A Closed Container (NOV #9)

According to 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(d)(1), universal waste-lamps must be stored in a closed container. The following universal waste-lamps were not stored in a closed container:

#### Electrical Closet

- 178 universal waste-lamps (see photos #20-#23).

#### 5.0.10. Universal Waste Not Labeled With The Words "Universal Waste-Lamps," "Waste Lamps," or "Used Lamps (NOV #10)

According to 10 CSR 25-16.273(1) incorporating 40 CFR 273.14(e), each universal waste-lamp or universal waste-lamp storage container must be marked as "Universal Waste-Lamps," "Waste Lamps," or "Used Lamps." The following universal waste-lamps were not properly marked:

#### **Electrical Closet**

- 178 universal waste-lamps (see photos #20-#23).

#### Hazardous Waste Storage Container Not Marked Per The DOT Requirements During The Entire On-Site Storage Period

This issue was inadvertently left off the *Notice of Violation* form. According to 10 CSR 25-5.262(2)(C)1, hazardous waste storage containers must be marked per the DOT requirements during the entire on-site storage period. After further review of inspection correspondence (inspection notes and photographs), I identified one 1 gallon hazardous waste storage container of waste stain (located at the Hazardous Waste Storage Area) not labeled per the DOT requirements (see photo #6). At the time of the inspection, Ms. Adkins marked the hazardous waste storage container per the DOT requirements. *This issue was corrected at the time of the inspection* (see photo #7).

#### 6.0 SUMMARY

I reviewed all applicable SQG requirements and all observed violations are noted in Section 5.0.

Michael J. Martin

**Environmental Scientist** 

Date: May 31, 2011

#### Attachments

- 1) Region 7 Multi-Media Screening Checklist (2 pages)
- 2) Facility Layout (1 page)
- 3) Campus Map (2 pages)
- 4) MDNR SQG Inspection Checklist (9 pages)
- 5) Exit Briefing Attendance List (1 page)
- 6) Confidentiality Notice (1 page)
- 7) Receipt for Documents and Samples (1 page)
- 8) Notice of Violation (4 pages)
- 9) EPA RCRA Handler Information Report (1 page)
- 10) 2009-2011 Uniform Hazardous Waste Manifests (19 pages)
- 11) Spectra MRSA Detection Method MSDS (4 pages)
- 12) Xpert MRSA Detection Method (10 pages)
- 13) Xpert MRSA Analytical Method (9 pages)
- 14) Formalin MSDS (7 pages)
- 15) 3M 1228 Indicator Tape MSDS (7 pages)
- 16) 3M 1248 Indicator Strip MSDS (7 pages).
- 17) 3M Comply 1243 Integrators MSDS (8 pages)
- 18) 3M Comply 1222 Indicator Tape MSDS (8 pages)
- 19) Steris LCC008 Indicator Strips MSDS (1 page)
- 20) 3M 1228 Indicator Tape Correspondence (3 pages)
- 21) Barium Sulfate MSDS (3 pages)
- 22) X-Ray Developer MSDS (2 pages)
- 23) X-Ray Fixer MSDS (2 pages)

Photo Log (3 pages)

Photographs (15 pages/27 photos)

Facility Name: St. John's Regional Medical Center Inspector Whole S. Markin Facility Ownership: Sisters of Mescal Primary Media: RCLA Inspector Phone Ext.: 7N9  City: John State: Mo Zip: 61801 Date: 05/4-5/2011  Phone: 314) 579-6100 Facility Contact: Species Octors (417) 625-2007 SIC/NAICS Code 62211  Number of Employees: 1,856 Work Hours/Shifts 24/1/5 day 17/2004 Facility Subject to OSHA regulations Yes 12/1/0 No Main facility activity, major process chemical(s) & description: Hospital C. Toruna Center  (Check all that apply): painting/coating (water-based 12/2) Solvent-based 13/2), printing 13/2, reacting 13/2, formulating 13/2, distilling 13/2, non-halogenated-based 13/2, combustion (boiler, furnaces, oxidizers) 13/2 plating (chrome 13/2), other 13/2  ENVIRONMENTAL JUSTICE (Note: Forward to EJ if a concern is identified during your inspection)
Main facility activity, major process chemical(s) & description:    Hosquatal CTauma Center
(Check all that apply): painting/coating (water-based ☑, solvent-based ☑), printing □, reacting □, formulating □, distilling □, water treatment □, refrigeration □, manufacturing □, parts washers/degreasing (water-based □, halogenated-based □, non-halogenated-based □), combustion (boiler, furnaces, oxidizers) □ plating (chrome □, other).  ENVIRONMENTAL JUSTICE (Note: Forward to EJ if a concern is identified during your inspection)
water treatment □, refrigeration □, manufacturing □, parts washers/degreasing (water-based □, halogenated-based □, non-halogenated-based □), combustion (boiler, furnaces, oxidizers) □ plating (chrome □, other).  ENVIRONMENTAL JUSTICE (Note: Forward to EJ if a concern is identified during your inspection)
1. Is the facility located in an <u>apparent</u> low income area (e.g., with many abandoned and dilapidated properties)? No ☐ (stop) Yes ☐ If yes, is facility less then 1000 feet from nearest routinely occupied property (house, school, etc.)? No ☐ (stop) Yes ☐ <i>Forward to EJ</i>
EMERGENCY PLANNING & COMMUNITY RIGHT TO KNOW ACT (EPCRA) & TOXIC SUBSTANCE CONTROL ACT (TSCA)  1. Did facility file a Tier II report with fire department, Local & State Emergency Planning Committee? Yes No Forward to EPCRA  2. Did facility manufacture, import, or process (formulate, blend, package) >25,000 lbs of a chemical or >100 lbs of a Persistent Bioaccumulative Toxin (lead, mercury, or polycyclic aromatic compounds) at any time over the last 5 years? No Forward to EPCRA  3. Has the facility: If any box in question 3 is marked - Forward to EPCRA  a. Stored ≥500 lbs of ammonia □, ≥100 lbs of chlorine □, or ≥10,000 lbs of an industrial chemical □, at any time over the last 2 years? □  b. Stored ≥10,000 lbs of pressurized flammable material (propane, methane, butane, pentane, etc.) at any time over the last 2 years? □  c. Used ≥10,000 lbs of ammonia □, chlorine □, halogenated solvents □, solvent-based paints □, or solvents □, or nitrated compound, over the last calendar year? □  d. Generated ≥ one half pound of metal dusts, fumes, or metal turnings, over the last calendar year? □  4. Does the facility have any oil filled electrical equipment No□ (stop) Yes □ Forward to TSCA and ask Has facility tested oil filled equipment to determine PCB content; No□ Yes □ number containing PCBs greater than 50 ppm and percent of all equipment tested Is equipment leaking (including wet or weeping equipment)? No□ Yes □ - Get Photo
CLEAN WATER ACT (CWA) - National Pollution Discharge Elimination System (NPDES), Industrial Pretreatment, Storm Water, & Wetlands  1. Does the facility discharge any wastewater to storm sewers, surface water, or the land? No (stop) Yes    If yes, are all wastewater discharges permitted? Yes   No   Forward to CWA  2. Does the facility have process wastewaters that are discharged to a city POTW (Publicly Owned Treatment Works)? No (stop) Yes    If yes, are the discharges permitted by: State?   City?   - If yes, Stop here. No   Forward to CWA  If yes, does the city have a state or EPA approved pretreatment program? Yes   No or Don't Know   Forward to CWA  3. During rainfall events, can storm water carry pollutants from manufacturing, processing, storage, disposal, shipping and receiving areas, or from construction sites >1 acre, to storm sewers or surface water? No   (stop) Yes   No   Forward to CWA  4. Did you see any wastewater discharges not identified by the facility? No   (stop) Yes   - Identify location, time, appearance of discharge: (Get Photo) Forward to CWA
5. Does the facility have any wetland areas (e.g. streams, ponds, or temporarily wet areas)? No 🗍 (stop) Yes 🗆 If yes, have any wetland areas been dredged, filled, channelized, dammed, or had gravel removed from them within the last 5 years?  No 🗆 (stop) Yes 🗆 - Identify location and timeframe

Version 08.23.05a

<u>GRAY SHADED AREAS INDICATE ITEMS YOU NEED TO LOOK FOR DURING VISUAL INSPECTION</u>



SAFE DRINKING WATER ACT (SDWA) - Underground Injection Control (UIC) & Public Water System (PWS)
1. Does facility discharge any <u>liquids</u> to the subsurface (septic systems, disposal wells, cesspools, etc.)? No (stop) Yes D Forward to UIC
If yes, do these liquid wastes consist of <u>sanitary wastewater only</u> ? . Yes □ . No □
2. Does facility provide drinking water to 25 people or more from its own source (private well, pond, etc)? No (stop) Yes Forward to PWS
If yes, does the facility test or monitor its drinking water in order to comply with state regulations? Yes 🔲 No 🗆
CLEAN AIR ACT (CAA) and CFCs
1. Do you see any dense, non-steam, smoke or dust emissions leaving the facility property? No V Yes V Forward to CAA
Source (Get Photo)
2. Does the facility have any new air pollution emitting equipment that was constructed or installed in the past 5 years? No LI (stop) Yes LI
If yes, is equipment permitted? Yes □ No □ Forward to CAA Describe:
3. Does the facility have any cooling units that contain >50 lbs of refrigerant? No □ (stop) Yes □ Forward to CFC
If yes, are these units: Self-serviced? ☐ Contract Serviced? ☐ - Service Company: Not Knoon
4. Does the facility have a refrigeration process that contains more than 10,000 lbs of ammonia? No 🖸 (stop) Yes 🗆 Forward to EPCRA/RMP
5. Does the facility service motor vehicle air conditioning systems? No 🖸 (stop) Yes 🗆 Forward to CFC
RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) and UNDERGROUND STORAGE TANKS (UST)
1. Does the facility generate more than 30-gallons (220 lbs./100kg) of hazardous waste per month or at any one time? No ☐ (stop) Yes ☐
If yes, does facility have an EPA Hazardous Waste Identification Number? Yes ☑ (Stop) No ☐ Forward to RCRA
2. Is hazardous waste treated □ , stored >90-days □, burned □ , land filled □ , put in surface impoundments □ or waste piles □ ?
No ☑ (stop) Yes ☐ If yes, is the facility permitted for above described activity? Yes ☐ No ☐ <i>Forward to RCRA</i>
3. Did you see or does the facility have any large quantities of materials that the facility claims to be non-hazardous waste material (>10 drums,
roll-offs, waste piles, etc. – exclude clean office trash, cardboard, & packaging type wastes)? No ☑ (stop) Yes □
Material Claimed To Be Non-Hazardous  How does the facility know these wastes are non-hazardous?
Testing, industry or manuf. info, MSDS, etc. □; None available □ <i>Forward to RCRA</i>
Testing, industry or manuf. info, MSDS, etc. □; None available □ Forward to RCRA
Testing, industry or manuf. info, MSDS, etc. □; None available □ Forward to RCRA
Testing, industry or manuf. info, MSDS, etc. $\square$ ; None available $\square$ Forward to RCRA
Testing, industry or manuf. info, MSDS, etc. 🗆 ; None available 🗅 Forward to RCRA
4. Did you see any leaking hazardous waste containers, drums, or tanks? No Ves Ves Forward to RCRA
Describe: (Get Photo)
5. Did you see any signs of spills or releases (e.g., dead or stressed vegetation, stains, discoloration)? No 🗗 Yes 🗆 Forward to RCRA
Describe: (Get Photo)
6. Did you see any chemical or waste handling practices that concern you (access to children/public)? No 🗹 Yes 🗆 Forward to RCRA &
EPCRA Describe: (Get Photo)
7. Does the facility have any past or present underground petroleum product or hazardous material tanks? No  Yes  Forward to UST
8. Does the facility have any underground fuel tanks for emergency generators? No   Yes   Forward to UST
SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN (SPCC)  1. Does the facility-frave any aboveground oil tanks (petroleum, synthetic, animal, fish, vegetable), with an aggregate volume >1,320 gallons?
No ☐ (stop) Yes ☐ - Does the facility have a certified SPCC Plan? Yes ☐ No ☐ Forward to SPCC
If yes, are there secondary containment systems for the tanks? Yes \(\sigma\) No \(\sigma\) Forward to SPCC
If yes, are any tanks <u>leaking</u> where oil could reach waters of the State or U.S.? No \( \text{No } \text{ Yes } \text{ \( \text{ (Get Photo} \) Forward to SPCC \)
ENVIRONMENTAL MANAGEMENT SYSTEMS (EMS)
1. Does your facility have an EMS? Not Yes Yes
2. Is the facility's EMS ISO 14001 certified? No ✓ Yes □
*PLEASE TAKE <u>PHOTOS</u> TO DOCUMENT POTENTIAL PROBLEMS
Version 08.23.05a GRAY SHADED AREAS INDICATE ITEMS YOU NEED TO LOOK FOR DURING VISUAL INSPECTION

TACHMENT Page of ATTACHMENT Page of

# ST. JOHN'S REGIONAL MEDICAL CENTER FACILITY LAYOUT

1<sup>st</sup> Floor- Receiving Dock, Materials Management, Food Services, Biomedical Services, Radiation Oncology, Mercy Conference Centers, Business Office, Human Resources, Security Dispatcher, Laboratory, Cafeteria, Hospital Pharmacy.

2<sup>nd</sup> Floor- Surgery Center (Outpatient, PACU, main OR, Endoscopy lab), Administration, Library, Medical Affairs, Medical Records, Radiology, Mercy Pharmacy, Security, Cardiopulmonary (Respiratory, Cardiology), Emergency Services, Registration Office.

**3<sup>rd</sup> Floor** – 3 East- ICU, Cardiac Surgical, and Outpatient Care Unit (use East elevators) 3 Central- CV Holding, Cath Labs, CVOR (use West elevators) 3 West- CVICU (use West elevators)

4<sup>th</sup> Floor- 4 East- Medical/Oncology 4 West- Medical/Renal

**5<sup>th</sup> Floor-** (use East elevators only) 5 East- Surgical

5 Central & 5 West- Hawthorn Center (Psychiatric)

6<sup>th</sup> Floor-6 East- Orthopedics 6 Central- Acute Physical Therapy, Social Services, Clinical Nutrition 6 West- Neurology / Neurosurgery

7<sup>th</sup> Floor- 7 East- Medical Cardiology (use East elevators)
7 Central- CCU (use West elevators)
7 West- Pediatrics (use West elevators)

8<sup>th</sup> Floor-8 East- Obstetrics

9<sup>th</sup> Floor- 9 East- Education Offices and Classroom, Cardiac Rehab Classroom, Sleep Disorders, Cardiopulmonary Rehab, Heart Failure Clinic, Computer (IS) Classroom.



#### St. John's Medical Staff By Specialty

	St. John's Medical :	, .
Allergy/Immunology Michael Joseph, MD	(417) 624-0050	Neurosurgery continued Hish Majzoub, MD (417) 781-4733
David Straub, MD	(417) 782-1343	M. Ellen Nichols, MD (417) 782-5500 Cherylon Yarosh, MD (417) 782-5500
Kalai R. Huff, MD	(417) 625-2403	Obstetrics/Gynecology John Chesney, MD (417) 782-3500
Tamara Rice, MD	(417) 625-2403	Julia Chowdhury, MD (417) 627-8370
Clifford Turk, MD	(417) 625-2403	David Dugger, MD
Tacee E. Walker, DO Xi Zhu, MD	(417) 625-2403 (417) 625-2403	Hugh Lacey, MD(417) 624-2111 Jason Sloan, DO(417) 781-1367
Cardiology	(918) 786-7667	Amy Warner, DO (417) 781-2195 Oncology/Hematology
Francis Corcoran, MD	(417) 781-5387	Robert Carter, MD (417) 623-7700
Ali Hammad, MD	(417) 781-5387 (620) 232-5705	Bruce Chosney, MD
	(417) 206-3729	Irving LaFrancis, MD (417) 782-7722 Mark Skelley, MD
Thomas Moore, MD	(417) 627-9993	Ophthalmology Ernest M. Bhend, MD(417) 626-8082
Ronnie G. Smalling, MD .	(417) 781-5387	Lance Brown, MD (417) 781-3630
Cardiology Electrophysic	(417) 206-3729 blogy	Trey Butler, MD
Rafael J. Gaytan, MD Cardiovascular Surgery	(417) 206-3729	E. L. Jordan, DO (417) 781-0044 William Meredith, MD
Joseph Graham, MD	(417) 782-2190	Ramesh Shah, MD (417) 781-2616
Steven Meyer, MD	(417) 782-2190	Charles Sherrod, MD (417) 781-3630 John Yuhas, MD (417) 781-3630
	(417) 781-3182	Oral Surgery Bradley R. Burnett, DDS (417) 621-0500
	(417) 781-3020 (417) 623-2440	Frank Schaffer, DDS(417) 623-2000 Matthew W. Sheffer, DDS(417) 625-1122
Dermatology	(417) 624-0440	Orthopaedic Surgery
Derek Towery, MD	(417) 624-0440	J. Christopher Banwart, MD (417) 206-7846 David Black, MD (417) 781-2807
Ear, Nose, Throat R. Hilton McDonald, DO	(417) 627-8566	Brian Ellefsen, DO
Frank Shagets, MD	(417) 623-5111 (417) 781-4613	Jonathan L. Grantham, MD (417) 206-7846
Emergency Medicine		Brian J. Ipsen, MD
Barbara Chilton, DO	(417) 625-2300	Derek W. Miller, DO
	(417) 625-2300	Terry D. Schwab, MD
David Hagedorn, MD	(417) 625-2300 (417) 625-2300	Robert Stringer, DO
Karl F. Kauffman, MD	(417) 625-2300	Pain Management Mark Pinkerton, MD (417) 781-7246
	(417) 625-2300	Pathology Michael Hurly, MD (417) 623-6330
Gary Randolph, MD	(417) 625-2300	Margaret Janssen, MD (417) 623-6330
D. Paul Schaefer, DO	(417) 625-2300	Michael Kane, MD
Kenneth C. Stewart, DO .	(417) 625-2300	Susan Pintado, MD (417) 623-6330 Pediatric Cardiology
James L. Compton, DO	mily Practice (417) 625-2300	Mark Gelatt, MD (888) 550-3880 A. James Shapiro, MD
ExpressCare	(417) 623-2207	Pediatric Dentistry
Glen King, DO	(417) 623-2207	Benjamin Rosenberg, DDS (417) 781-2220  Pediatric Hospitalist
Family Practice	(417) 451-2060	Carolyn P. Prater, DO (417) 659-9100 Pediatric Neurology
Stephen Bazzano, DO F. Rollin Bland, MD	(620) 783-1358 (918) 786-4448	Bernardo Flasterstein, MD (417) 820-9055 Pediatrics
Phillip Bortmes, DO	(620) 795-2525 (417) 673-1301	E. DiAnn Hunter, MD (417) 782-5522
Cynthia Croy, MD	(417) 624-4060	Kelly J. Meler, DO
James C. Eaton, DO	(417) 782-5230 (620) 856-2182	Fredric Wheeler, DO
	(417) 624-4060	Saad Al-shathir, MD (417) 782-4111
Thomas Hamilton, DO	(417) 781-6722 (417) 451-2060	Laurie Behm, MD
William Hughes, DO	(417) 781-2525	Deborah R. Schneider, MD (417) 659-6716 Plastic Surgery
Mary K. Kennedy, DO	(417) 682-5508	Duane Sherrod, MD (417) 782-3100 Frank Shagets, MD* (417) 623-5111
	(417) 781-0408	Podiatry * limited to face and neck
Michael Knapp, DO Orville Mehaffy MD	(417) 781-1929 (417) 782-6600	David Dowell, DPM
Timothy O'Keefe, MD	(417) 782-6767	Jeffrey Haste, DPM (417) 659-9395 Valarie Ikerd, DPM
	(417) 359-8646 (620) 429-3636	Randall Kunze, DPM (417) 358-8566
	(417) 627-9600 (417) 359-8803	Matthew Richins, DPM (417) 782-7500 Corin Q. Wilde, DPM (620) 231-5940
Peter Warner, DO	(417) 781-0408	Psychiatry Oscar Gonzalez, MD (417) 627-0909
Gastroenterology	(417) 451-2060	William Klontz, MD (417) 781-7337
	(417) 623-5250	James Orlando, MD (417) 781-7337 Tamon Paige, MD (417) 781-7337
David Seidl, MD		Tabassum Saba, MD (417) 782-5063 Pulmonology
X. John Wu, MD	(417) 701-7110	S. Anwar Ahmed, MD (417) 627-8377 Blake Little, MD
Gynecology Christopher Roberts, MD .	(417)782-1271	Annie Nawab, MD (417) 627-8377
Hospitalist Sved S. Anwer MD	(417) 659-6336	Festus A. Ndukwu, MD
Salim Baghli, MD	(417) 659-6336	Sitaraman Subramanian, MD (417) 627-8377 Navid S. Zaidi, MD (417) 782-5063
Connie Drapcho, MD	(417) 659-6336 (417) 659-6346	Radiation Oncology
	(417) 659-6346	Duane Myers, MD
Sanjay Malhotra, MD	(417) 659-6336 (417) 659-6336	Radiology Richard J. Price, MD(417) 625-2093
Infectious Disease		S. Horatio Slawson, MD (417) 625-2093
	(417) 781-8688	Sonu Suri, MD
Internal Medicine Dewey P Ballard MD	(417) 782-1600	Thomas Ward, DO
Bernard Bettasso, MD	(417) 624-8823	Rheumatology
Randy Bowles, MD	(417) 782-1600 (417) 781-0224	Ali Abu-Libdeh, MD
	(620) 856-3469	Richard Kenney, DO (417) 359-2675 Sleep Disorders
W. Heath Dillard, MD	(417) 359-8803	Amy Meoli, MD (417) 625-2808 Surgery
Michael D. Nickell, MD	(417) 627-1300	Samuel C. Bieligk, MD (417) 781-1788
W. Dale Rankin, DO	(417) 673-2448 (417) 782-1600	Alan Buchele, MD (417) 206-3103 Mark S. Cotner, MD (918) 786-7300
Jack Rhoads, MD	(417) 626-8200	T. Brad Coy, DO
S. Kenneth Turner, DO	(417) 782-3032	Robert Dodson, MD
Michael Yuhas, MD	(417) 624-4701 (417) 623-5044	Charles Y. Ro, MD (417) 781-4404
<b>Nephrology</b> Ahmed Aboul-Magd, MD.	(417) 782-5000	Surgical Oncology Samuel C. Bieligk, MD (417) 781-1788
Neurology	(417) 659-6876	Urology G. Scott Brehm, MD (417) 623-3703
Neurosurgery		J. Mark Frogge, MD (417) 623-3703
Brian v. Curtis, MD Arthur Daus, MD	(417) 659-6876 (417) 624-7700	Roger Schoenfeld, DO (417) 781-7220  Wound Care / Hyperbaric Medicine
	continued	Joseph Newman, MD (417) 659-6967

Alphabetical Listing



































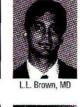






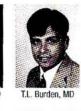






















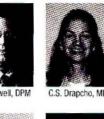


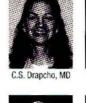
















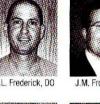
























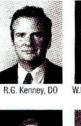
















































































Joplin, Missouri





























St. John's

















St. John's Regional Medical Center is a 367-bed facility, serving 19 counties in Missouri, Oklahoma, Kansas, and Arkansas, providing state-of-the-art healthcare services, specializing in cardiology, orthopedics, neurosciences,

and oncology. St. John's has been leading the way in healthcare throughout the four-state area for more than 100 years and has earned the Gold Seal of Approval<sup>TM</sup> from The Joint Commission. St. John's is the only hospital in Joplin that currently holds this distinction.



# THOMSON THOMSON TOP HOSPITALS Cardiovascelar Cardiovascelar National Perference Superconcer Leaders

#### **Helpful Phone Numbers**

GENERAL INFORMATION:	417-781-2727
Center for Breast Care	417-625-CARE
Center for Cancer Care	417-625-2488
Center for Heart Care	417-625-2102
Center for Behavioral Health Services	417-625-2354
Center for Orthopaedic Care	417-625-2369
Emergencies	911
Express Care	417-623-2207
Express Care at Neosho	417-451-2060
Health Connection	417-625-2388
HealthFirst	417-625-2486
Home Care Services	417-781-2004
Hospice	417-623-8164
Medical Equipment Co	417-627-8424
	or 800-874-7048
Medical Group	
	or 877-627-8700
Medical and Consumer Health Library	
Mercy Discovery Center	
Mercy Regional Foundation	417-625-2266
Poison Control Center	417-625-2305
Rehabilitation Center	417-625-2196
Sister Kevin Kirwan Birthing Center	417-625-BABY
Sleep Disorder Center	417-625-2808
SportsCare	417-625-2811
Wound Healing & Hyperbaric Medicine Center	417-659-6967

St. John's Referral One

Physician & Service Referrals

417-625-2000

Click here for online health information

www.stj.com

When it matters most. | Think St. John's.

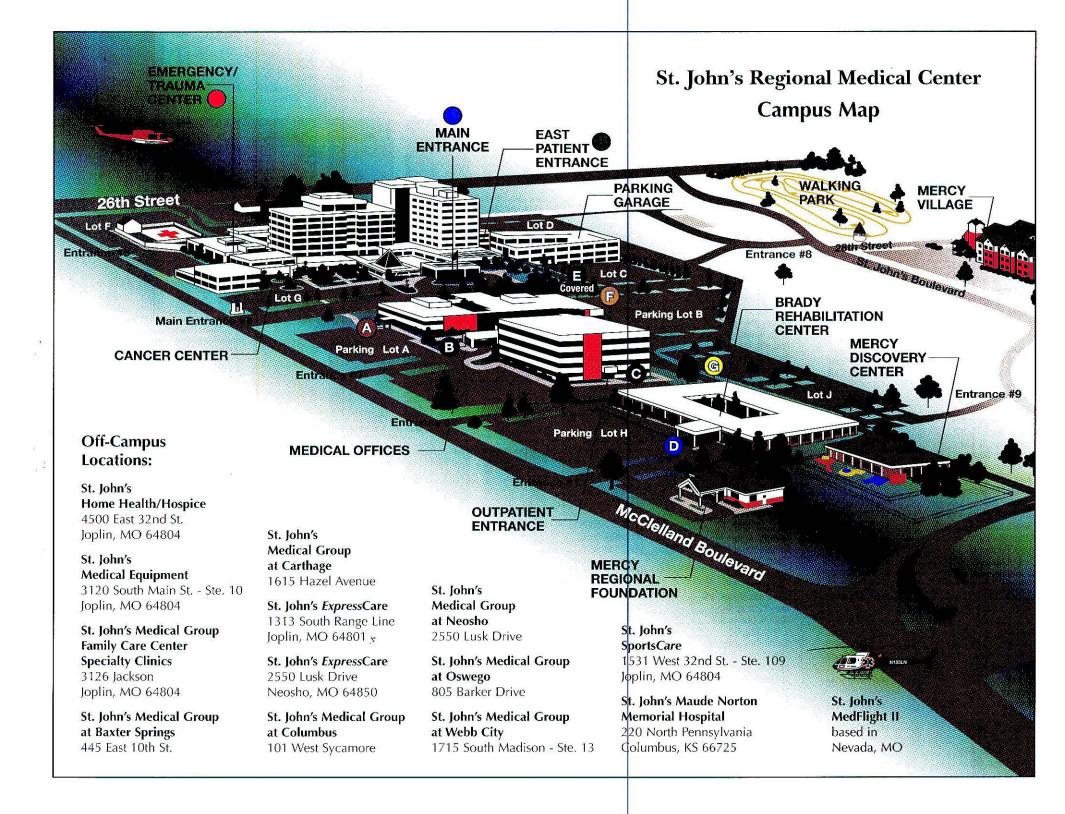
CATHOLIC HEALTH

St. John's

Joplin, Missouri

Joplin, Missouri 64804







### MISSOURI DEPARTMENT OF NATURAL RESOURCES HAZARDOUS WASTE PROGRAM

#### SMALL QUANTITY GENERATOR INSPECTION CHECKLIST

S

FOR FACILITIES THAT GENERATE/ACCUMULATE < 1,000 Kg (2,200 lbs, OR APPROXIMATELY FIVE DRUMS < 2.2 lbs OF ACUTELY HAZARDOUS WASTE)								
NAME				ili i i i i i i i i i i i i i i i i i i	EPA ID NUMBER	JMBER		
St. John's Regional Medical Center	St. John's Regional Medical Center May 4-5, 201				MOD07626	MOD076262500		
ADDRESS		RESOURCE	RECOVERY NUMBER	MOIDNU	MBER TELEP	HONE NUMBER WITH AREA CODE		
2727 McClelland Blvd.					(417)	625-2007		
CITY	COUNTY		ZIP CODE		YEARS AT SITE	NUMBER OF EMPLOYEES		
Joplin	Jasper		64804		- 1,856			
DATE OF LAST INSPECTION RI	EGIONAL OFFICE	NERO 🗌 SEI		KING NUMBE	R			
PRIMARY CONTACT NAME	SLRO		PRIMARY CONTAC	T TITLE				
Spencer Dobbs			Safety Officer					
SECONDARY CONTACT NAME			SECONDARY CON	TACT TITLE				
Michael Wardlow			Corporate Res	sponsibili	ty Manager			
CHECKLIST ATTACHMENTS								
Used Oil Generator Res	ource Recov	/ery	Tank Attachme	ent	Universa	al Waste Attachment		
☐ Yes ☑ No ☐	Yes 🔽	No	☐ Yes	No	$ \mathbf{V} $	Yes		
DESCRIPTION OF THE FACILITY'S O	PERATION	AND PLANT			and the second			
WASTE STREAMS								
DESCRIBE EACH WASTE STREAM (INCLUDING THE PRODUCTION I			GENERATION RAT	E EP	A WASTE CODES	DISPOSITION		
See the Inspection Report.								
2.					*			
3.								
4.								
5.			×					
6.	(a)							
MO 780-1602 (01-11)								

A. GENERAL			COMMENTS
N Y NA 1. 🗌 🗹 🗌	Registered as a hazardous waste generator - Section 260.380.1(1) RSMo and 10 CSR 25.5.262(2)(A).	1	
2. 🗸 🗌 🖺	Facility determines if waste is hazardous - 10 CSR 25-5.262(1) incorporating 40 CFR 262.11.	1	
3. 🗌 🗸 🗌	Uses a licensed hazardous waste transporter - Section 260.380.1(5) RSMo.	1	
4. 🗌 🗸 🗌	Uses authorized hazardous waste Treatment, Storage or Disposal, or TSD, facility or Resource Recovery facility – Section 260.380.1(7) RSMo.	1	
5. 🗌 🗎 🗸	Does not operate as a TSD - Section 260.390.1(1) RSMo.	1	
6. 🗸 🗌 🗎	Facility has updated notification as required - 10 CSR 25-5.262(2)3.B.	2	
7. 🗌 🗸 🗀	Materials are not accumulated speculatively - 10 CSR 25-4.261 incorporating 40 CFR 261.1(c)(8).	2	,
8. 🗌 🗸 🗀	Facility can demonstrate legitimate recycling - 10 CSR 25-4.261 incorporating 40 CFR 261.2(f).	2	
	PART 1: WALK-THROUGH INSPE	CTIO	
B. PRETRANS	PORT, CONTAINERIZATION AND STORAGE		COMMENTS
1. 🗌 🗹 🗌	Storage does not exceed 180 days or 270 days if transported > 200 miles - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d) or 40 CFR 262.34(e).	1	
2. 🗌 🗸 🗌	Containers in good condition - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(2) referencing 40 CFR 265.171.	1	
3. 🗌 🗸 🗌	Waste compatible with container - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(2) referencing 40 CFR 265.172.	1	
4. 🗌 🗸 🗌	Containers closed in storage - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(2) referencing 40 CFR 265.173(a).	1	
5. 🗌 🗸 🗌	Containers storing incompatible waste separated or protected from each other by a dike, berm or wall - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(2) referencing 40 CFR 265.177(c).	1	*
6. 🗌 🗸 🗌	Containers of ignitable or reactive waste stored > 50 ft. from property line (or meet requirements) - 10 CSR 25-5.262(2)(C)6 referencing 40 CFR 265.176 as amended by 10 CSR 25-7.265(2)(1) 7 & 8.	2	
7. 🗸 🗌 🖺	Waste packaged/labeled/marked per Department of Transportation during entire on-site storage period - 10 CSR 25-5.262(2)(C)1.	2	
8. 🗸 🗌 🔲	Date of accumulation marked on containers - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(4) referencing 40 CFR 262.34(a)(2).	2	
9. 🗌 🗸 🗌	Containers protected from contact with accumulated liquids - 10 CSR 25-5.262(2)(C)2.D(II).	2	
10. 🗸 🗌 🔲	Containers clearly marked "Hazardous Waste" - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(4) referencing 40 CFR 262.34(a)(3).	2	
11. 🗸 🗌 🗎	Facility inspected and maintained (weekly) - 10 CSR 25-5.262(2)(C)2.C(I)&(II) referencing 40 CFR 265.174.	2	
12. 🗸 🗌 🔲	Daily inspection of areas subject to spills, i.e., waste handling areas - 10 CSR25-5.262(2)2.C(II).	2	

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B. PRETRANS	PORT, CONTAINERIZATION AND STORAGE		
N Y NA 13. 🗌 🗸 🗌	Adequate aisle space is available - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(4) referencing 40 CFR 265.35.	2	
14. 🗌 🗸 🗌	Placards available for transporter - 10 CSR 25-5.262(1) incorporating 40 CFR 262.33.	2	
15. 🗌 🗸 🗌	Precautions are taken to prevent accidental ignition or reaction of ignitable or reactive wastes, including confining smoking and open flame to specially designated locations and conspicuously placing "No Smoking" signs by ignitable or reactive wastes - 10 CSR 25-5.262(2)(C)2.F(II).	2	*
C. SATELLITE	ACCUMULATION		COMMENTS
1. 🗌 🗹 🗌	Containers kept closed – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1)(i) referencing 40 CFR 265.173(a).	1	
2. 🗌 🗸 🗌	Containers in good condition – 10 CFR 25-5.262(1) incorporating 40 CFR 262.34(c)(1)(i) referencing 40 CFR 265.171.	1	
3. 🗌 🗸 🗌	Waste compatible with container – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1)(i) referencing 40 CFR 265.172.	1	
4. 🗌 🗸 🗌	Quantities accumulated not exceeding 55 gallons (1 quart of acutely hazardous wastes) – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1).	1	
5. 🗌 🗸 🗀	Satellite containers go to storage within 3 days of filling – 10 CSR 25-5.262 incorporating 40 CFR 262.34(c)(2).	1	
6. 🗌 🗸 🗌	Container marked identifying contents and beginning date – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1)(ii) as modified by 10 CSR 25-5.262(2)(C)3.	2	
	(2010) Julian (10-10) (2011-10-10) (2011-10-10-10-10-10-10-10-10-10-10-10-10-		
7. 🗌 🗸 🗌	Stored in satellite areas less than 1 year – 10 CSR 25-5.262(2)(C)3.	2	
7.	Stored in satellite areas less than 1 year –	2	
8. 🗆 🗸 🗀	Stored in satellite areas less than 1 year – 10 CSR 25-5.262(2)(C)3.  Satellite containers stored at or near the point of waste generation and under the control of the operator –		COMMENTS
8. 🗆 🗸 🗀	Stored in satellite areas less than 1 year – 10 CSR 25-5.262(2)(C)3.  Satellite containers stored at or near the point of waste generation and under the control of the operator – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1).		COMMENTS
8. 🗌 🗸 🗍	Stored in satellite areas less than 1 year – 10 CSR 25-5.262(2)(C)3.  Satellite containers stored at or near the point of waste generation and under the control of the operator – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1).  NESS, PREVENTION AND EMERGENCY PROCEDURES  Facility operated and maintained to minimize the possibility of an emergency – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(a)(4) referencing	2	COMMENTS
8.	Stored in satellite areas less than 1 year – 10 CSR 25-5.262(2)(C)3.  Satellite containers stored at or near the point of waste generation and under the control of the operator – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1).  NESS, PREVENTION AND EMERGENCY PROCEDURES  Facility operated and maintained to minimize the possibility of an emergency – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(a)(4) referencing 40 CFR 265.31.  Adequate and proper spill control, decontamination and safety equipment available (fire blankets, respirators, Self Contained Breathing Apparatus, absorbents, etc.) – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(a)(4) referencing 40 CFR 265.32 as amended by	1	COMMENTS
8.	Stored in satellite areas less than 1 year – 10 CSR 25-5.262(2)(C)3.  Satellite containers stored at or near the point of waste generation and under the control of the operator – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1).  NESS, PREVENTION AND EMERGENCY PROCEDURES  Facility operated and maintained to minimize the possibility of an emergency – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(a)(4) referencing 40 CFR 265.31.  Adequate and proper spill control, decontamination and safety equipment available (fire blankets, respirators, Self Contained Breathing Apparatus, absorbents, etc.) – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(a)(4) referencing 40 CFR 265.32 as amended by 10 CSR 25-5.262(2)(C)2.G.  Adequate water supply and fire control equipment – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(a)(4)	1 2	COMMENTS
8.	Stored in satellite areas less than 1 year – 10 CSR 25-5.262(2)(C)3.  Satellite containers stored at or near the point of waste generation and under the control of the operator – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1).  NESS, PREVENTION AND EMERGENCY PROCEDURES  Facility operated and maintained to minimize the possibility of an emergency – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(a)(4) referencing 40 CFR 265.31.  Adequate and proper spill control, decontamination and safety equipment available (fire blankets, respirators, Self Contained Breathing Apparatus, absorbents, etc.) – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(a)(4) referencing 40 CFR 265.32 as amended by 10 CSR 25-5.262(2)(C)2.G.  Adequate water supply and fire control equipment – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(a)(4) referencing 40 CFR 265.32(c) and (d).  Communication and emergency equipment tested and maintained - 10 CSR 5-5.262(1) incorporating	2 2 2	COMMENTS
8.	Stored in satellite areas less than 1 year – 10 CSR 25-5.262(2)(C)3.  Satellite containers stored at or near the point of waste generation and under the control of the operator – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(c)(1).  NESS, PREVENTION AND EMERGENCY PROCEDURES  Facility operated and maintained to minimize the possibility of an emergency – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(a)(4) referencing 40 CFR 265.31.  Adequate and proper spill control, decontamination and safety equipment available (fire blankets, respirators, Self Contained Breathing Apparatus, absorbents, etc.) – 10 CSR 25-5.262(1) incorporating 40 CFR 265.32 as amended by 10 CSR 25-5.262(2)(C)2.G.  Adequate water supply and fire control equipment – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(a)(4) referencing 40 CFR 265.32(c) and (d).  Communication and emergency equipment tested and maintained - 10 CSR 5-5.262(1) incorporating 40 CFR 265.33.  Emergency Coordinator's name and phone number posted near phone – 10 CSR 25-5.262(1) incorporating	2 2 2	COMMENTS

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D. PREPARED	NESS, PREVENTION AND EMERGENCY PROCEDURES		COMMENTS
N Y NA 7. □ ☑ □	Location of fire extinguisher and spill control equipment posted near phone – 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(5)(ii)(B).	2	
8. 🗌 🗸 🗌	Employees familiar with waste handling and emergency procedures - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(5)(iii).	2	
9. 🗆 🗸 🗀	Device in the hazardous waste operation area capable of summoning emergency assistance - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(4) referencing 40 CFR 265.34(a).	2	
10. 🗆 🗸 🗀	Telephone or two-way radio on-site and capable of summoning local fire or police department, or local or state emergency response teams - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(4) referencing 40 CFR 265.32(b).	2	
11. 🗆 🗸 🗆	Arrangements with local emergency agencies - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(4) referencing 40 CFR 265.37.	2	
12. 🗌 🗸 🗌	Emergency coordinator(s) on premise or on call - 10 CSR 25-5.262(1) incorporating 40 CFR 262.34(d)(5)(i).	2	
	PART 2: RECORDS INSPECTI	ON	
E. MANIFESTS			COMMENTS
1. 🗆 🗸 🗆	Facility uses manifest system or wastes reclaimed under contractual agreement - Section 260.380.1(6) RSMo and 10 CSR 25-5.262(2)(B) or 10 CSR 25-5.262(1) incorporating 40 CFR 262.20(e)1.	1	
2. 🗌 🗸 🗌	Tests waste or uses knowledge of waste to determine if the waste is restricted from land disposal - 10 CSR 25-7.268(1) incorporating 40 CFR 268.7(a).	1	
3. 🗌 🗸	Generator maintains a copy of the reclamation agreement on-site for at least three years after expiration of agreement - 10 CSR 25-5.262(1) incorporating 40 CFR 262.20(e)(2).	2	
4. 🗌 🗸 🗌	Manifests maintained for a three year period - 10 CSR 25-5.262(1) incorporating 40 CFR 262.40(a).	2	
5. 🗌 🗸 🗌	Generator's EPA ID number - 10 CSR 25-5.262(1) incorporating 40 CFR 262.20(a) as amended by 10 CSR 25-5.262(2)(B)1.	2	
6. 🗆 🗸 🗆	Generator's name, address and phone number - 10 CSR 25-5.262(2)(B)1.	2	
7. 🗆 🗸 🗆	All transporter's names and EPA ID numbers - 10 CSR 25-5.262(2)(B)1 & 2.	2	
8. 🗌 🗸 🗌	Designated facility name, address, phone number and EPA ID numbers – 10 CSR 25-5.262(2)(B)1 and 2.	2	
9. 🗌 🗸 🗌	Department Of Transportation shipping name, Hazard class and waste ID number (Reportable Quantities - if required) - 10 CSR 25-5.262(2)(B)1 & 2.	2	
10. 🗌 🗹 🔲	Containers and Quantity - 10 CSR 25-5.262(2)(B) 1 and 2.	2	
11. 🗌 🗸 🗎	Manifest signed and dated - 10 CSR 25-5.262(2)(B) 1.	2	
12. 🗌 🗹 🔲	Manifest returned within 35 days - or exception report submitted within 45 days - 10 CSR 25-5.262(2)(D)2.C.	2	
13. 🗌 🗹 🗌	"Land-Ban" notification/certification sent with manifests or with first shipment - 10 CSR 25-7.268(1) incorporating 40 CFR 268.7(a).	2	
14. 🗌 🗸 🗍	Notification/Certification includes correct EPA hazardous waste number, corresponding treatment standards, manifest number and waste analysis data - 10 CSR 25-7.268(1) incorporating 40 CFR 268.7(b).	2	
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COMMENTS: INCI	UDE DISCUSSION O	F FACILITY'S WASTE	MINIMIZATION PLAI		
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CHECK ALL POTE Air Pollution	NTIAL MULTI-MEDIA Public Drinking	VIOLATIONS AND IMI Solid Waste	PACTS (SPECIFY AI Hazardous	ND COMMENT BELOV Water Po	
Control	Water	Management Management	Waste	Con	
Fugitive Dust Particulate Burning Asbestos Odors Toxics Other	Taste & Odors Bacteria Pressure Color Flow Toxics Other	Open Dumps Littering Waste Tire Dump SLF Other	☐ Transportation ☐ PCBs ☐ USTs/LUSTs ☐ Other	Animal Waste Bypassing Treatment Plant Operation Sawdust Sludge	Single Family Ground Water Storm Water Toxics/UST Other
COMMENTS					
·	<u> 1978 - Angert Maria Mariana</u>		V.	And the second s	
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INSPECTOR'S SIGNATURE	isal What		-	ATE -/05/2011	
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### MISSOURI DEPARTMENT OF NATURAL RESOURCES HAZARDOUS WASTE PROGRAM

#### SMALL QUANTITY GENERATOR -UNIVERSAL WASTE ATTACHMENT

S-U

A small quantity	handler of universal was	te does not ac	cumulate 5	000 kg or m	ore total	l of al	I types of	unive	rsal waste at any time.
NAME	DATE . EPA ID NUMBER			?			MOIDI	NUMBER	
ADDRESS	DDRESS TELEPHONE NUMBER WITH AREA			REA CODE	R	R NUMBER			
CITY	CITY COUNTY ZIP CODE				YEARS AT S	SITE	DATE OF LAST INSPECTION		
CONTACT NAME		CONTACTIT					IMPER OF F	MDLOVE	
CONTACT NAME		CONTACT TIT	LE			N	UMBER OF E	MPLOYE	ES
M. GENERAL								CO	MMENTS
N Y NA 1. 🗌 🗹 🗌	Does not dispose of uni incorporating 40 CFR 2	73.11(a).		, ,	1				
2. 🗌 🗸 🗆	Does not dilute or treat of by 40 CFR 273.17 or 40 incorporating 40 CFR 27	CFR 273.13 -			1				
3. 🗆 🗸 🗆	Does not accept univers handlers unless operational collection program – 10	sal waste pesti ng a universal CSR 25-16.27	waste pesti 73(2)(B)1.	cide	2				
4. 🗆 🗸 🗆	Universal waste accumul date generated or receive 25-16.273(1) incorporate	ved from anoth	ner handler		2				
5. 🗸 🗌 🖺	Can demonstrate the le been accumulated from received (marking, labe valid method) – 10 CSR	ngth of time universal waste has the date it becomes a waste or is ling, inventory, dated area, or other 2 25-16.273(1) incorporating 40 CFR			2				
6. 🗆 🗆 🗹	to demonstrate activity i accumulating quantities	s solely for the to facilitate pro	aste for only one year unless able solely for the purpose of a facilitate proper recovery, 2 OCSR 25-16.273(1) incorporating						
N. PREPARED	NESS AND EMERGENC	THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW						CO	MMENTS
1. 🗌 🗹 🗆	Immediately contains al universal waste residue incorporating 40 CFR 2	s - 10 CSR 25		stes and	1				
2. 🗌 🗖 🗸	Determines if materials from a universal waste release are hazardous waste and are properly managed – 10 CSR 25-16.273(1) incorporating 40 CFR 273.17(b).				1				
3. 🗹 🗆 🗆	information describing p procedures appropriate	roper handling for universal w	no manage universal waste with per handling and emergency r universal wastes handled at the '3(1) incorporating 40 CFR 273.16.						
O. OFF-SITE S	Company of the Compan							CO	MMENTS
1. 🗆 🖸 🗖	Non-pesticide universal universal waste handler resource recovery facilit 25-16.273(1) incorporat 10 CSR 25-16.273(2)(B	, destination fa y, or foreign de ing 40 CFR 27	acility, Misso estination –	ouri 10 CSR	1				
2. 🗌 🔲 🗹	self transporting universincorporating 40 CFR 2	h universal waste transporter requirements if ing universal waste - 10 CSR 25-16.273(1) 2							
3. 🗆 🗆 🗹	Uses proper shipping documents, packages, labels, marks and provides placards per DOT requirements on universal waste that meets hazardous materials definition – 10 CSR 25-16.273(1) incorporating 40 CFR 273.18(c).			2					
4. 🗌 🗸 🗆	Ensures receiving hand prior to shipment – 10 CCFR 273.18(d).				2				

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O. OFF-SITE S	HIPMENTS (CONTINUED)		COMMENTS
5. 🗌 🗎 🗹	Accepts rejected universal waste or agrees with receiving handler to ship to an alternate destination facility – 10 CSR 25-16.273(1) incorporating 40 CFR 273.18(e).	2	
6. 🗆 🗆 🗸	Contacts originating handler to discuss reshipment of the load back to originating handler or to a mutually agreed on destination facility if handler rejects a shipment or portion of a shipment – 10 CSR 25-16.273(1) incorporating 40 CFR 273.18(f).	2	
N Y NA 7. □ □ ☑	Originating handler receives back or sends rejected pesticides to another Missouri-certified resource recovery facility or destination facility if universal waste pesticides are rejected – 10 CSR 25-16-273(2)(B)4.	2	
8. 🗌 🗖 🗸	Immediately notifies the department if receive a shipment of hazardous waste and provides required information – 10 CSR 25-16.273(1) incorporating 40 CFR 273.18(g).	2	
9. 🗆 🗸	Manages waste in compliance with applicable solid waste regulations if receives a shipment of non-hazardous, non-universal wastes – 10 CSR 25-16.273(1) incorporating 40 CFR 273.18(h).	2	
10. 🗆 🗆 🗹	Exported universal waste regulations met including notification, annual reporting, and record keeping – 10 CSR 25-16.273(1) incorporating 40 CFR 273.20 referencing 40 CFR 262 Subpart E or Subpart H.	2	
P. BATTERIES			COMMENTS
1. 🗆 🗆 🗸	Batteries stored in a manner to prevent releases to the environment (box, shrink wrapped pallet, container, etc) – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(a).	2	
2. 🗌 🗎 🗸	Damaged or leaking batteries kept in closed, structurally sound containers – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(a)(1).	1	
3. 🗆 🗆 🗸	Individual battery cells kept intact and closed while performing approved management of batteries (sorting, discharging, disassembling battery packs, etc) – 10 CSR 25-16.273(1) incorporating 40 CFR273.13(a)(2).	2	
4. 🗆 🗆 🗹	Cells immediately closed after the removal of electrolyte – 10 CSR 25-16.273(1) incorporating 40 CFR273.13(a)(2).	1	
5. 🗌 🗖 🗸	If casings of individual battery cells are breached then manages batteries as hazardous waste if characteristic – 10 CSR 25-5.262(1) incorporating 40 CFR 262.11.	1	
6. 🗆 🗆 🗹	Determines if electrolyte removed from cells and other solid wastes generated exhibit hazardous waste characteristics and properly manages wastes – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(3).	1	
7. 🗆 🗆 🗹	Batteries or battery containers clearly labeled or marked as "Universal Waste-Battery(ies)" or "Waste Battery(ies)" or "Used Battery(ies)" – 10 CSR 25-16.273(1) incorporating 40 CFR 273.14(a).	2	
Q. PESTICIDES			COMMENTS
	that have been recalled or are unused and gathered as a Misso universal wastes.	uri au	thorized waste pesticide collection program can
N Y NA 1. □ □ ☑	Universal waste pesticides stored in closed, structurally sound container that is compatible with the wastes and not leaking or damaged – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(b)(1).	1	
2. 🗆 🗆 🗹	Universal waste pesticides stored in closed, structurally sound transport vehicles/vessels that are compatible with the wastes and not leaking or damaged –10 CSR 25-16.273(1) incorporating 40 CFR 273.13(b)(4).	1	
3. 🗆 🗆 🗹	Universal waste pesticide stored in tanks that conform with Part 265 Subpart J except for 40 CFR 265.197(c), 265.200, and 265.201 – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(b)(3).	1	
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Q. PESTICIDES	S (CONTINUED)		COMMENTS
4. 🗌 🔲 🗸	Recalled universal waste pesticide container, tank, transport vehicle or vessel labeled or marked with the label that was on or accompanied the product as sold/distributed – 10 CSR 25-16.273(1) incorporating 40 CFR 273.14(b)(1).	2	
N Y NA 5. □ □ ☑	Unused universal waste pesticide container, tank, transport vehicle or vessel labeled or marked with the label that was on or accompanied the product as sold/distributed or the US DOT label as required by 49 CFR Part 172, or a label designated by the Missouri waste pesticide collection program — 10 CSR 25-16.273(1) incorporating 40 CFR 273.14(c)(1).	2	
6. 🗌 🗖 🗹	Universal waste pesticides container, tank, transport vehicle or vessel marked or labeled clearly with product label and the words "Universal Waste Pesticide(s)" or "Waste Pesticide(s)" – 10 CSR 25-16.273(1) incorporating 40 CFR 273.14(b)(2) and (c)(2).	2	
7. 🗆 🗆 🗹	Universal waste pesticides sent only to authorized destination facility or Missouri universal waste pesticide program – 10 CSR 25-16.273(2)(B).	1	
8. 🗌 🗎 🗸	Universal waste pesticides not sent to or received from another universal waste handler – 10 CSR 25-16.273(2)(B).	1	
R. MERCURY	CONTAINING EQUIPMENT		COMMENTS
1. 🗌 🔲 🗹	Mercury containing equipment stored in a manner to prevent releases to the environment (box, container, etc.) – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(c).	1	
2. 🗌 🗍 🗸	Damaged or leaking mercury containing equipment or mercury containing equipment with non-contained elemental mercury kept in a closed, structurally sound container – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(c)(1).	1	
3. 🗌 🗎 🗸	Mercury ampules or open original housing holding mercury removed over or in a containment device – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(c)(2)(ii).	1	
4. 🗌 🗎 🗸	Mercury clean-up system readily available – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(c)(2)(iii).	2	
5. 🗌 🗖 🗹	Mercury from spills or leaks of broken ampules or open original housing holding mercury immediately transferred to container meeting 40 CFR 262.34 requirements – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(c)(2)(iv).	1	
6. 🗌 🔲 🗹	Area where ampules or open original housing holding mercury are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels of mercury – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(c)(2)(v) and 273.33(c)(2).	2	
7. 🗌 🔲 🗸	Employees removing ampules or open original housing holding mercury thoroughly familiar with proper mercury handling and emergency procedure – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(c)(2)(vi).	2	
8. 🗌 🔲 🗹	Removed ampules or open original housing holding mercury stored in closed, non leaking containers that are in good condition and packaged with adequate packing material to prevent breakage during storage, handling, and transportation – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(c)(2)(vii).	1	
9. 🗌 🔽	Open original housing holding mercury removed from mercury containing equipment immediately sealed with airtight seal – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(c)(3)(i).	1	

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R. MERCURY	CONTAINING EQUIPMENT (CONTINUED)		COMMENTS
10. 🗆 🖸	Determines if wastes generated from mercury ampules or housing removal activities exhibits hazardous waste characteristics. If hazardous waste then manages as hazardous waste per 40 CFR part 262 – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(c)(4).	1	
11. 🗆 🗖	Universal waste mercury equipment or containers marked or labeled clearly: "Universal Waste-Mercury Containing Equipment" or "Waste Mercury Containing Equipment" or "Used Mercury Containing Equipment" – 10 CSR 25-16.273(1) incorporating 40 CFR 273.14(d)(1).	2	
12. 🗌 🔲 🗹	Universal waste mercury containing thermostats or containers marked or labeled as "Universal Waste-Mercury Thermostat(s)" "Waste Mercury Thermostat(s)" or "Used Mercury Thermostat(s)" – 10 CSR 25-16.273(1) incorporating 40 CFR 273.14(d)(2).	2	*
S. LAMPS			COMMENTS
1. 🗆 🗹 🗆	Broken or leaking lamps immediately cleanup and placed in closed, structurally sound, non-leaking containers and managed as hazardous waste – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(d)(2) and 10 CSR 25-5.262(1) incorporating 40 CFR 262.11.	1	
2. 🗌 🗹 🗌	Bulb crusher or other type of treatment not performed on lamps – Section 260.390.1(1) RSMo.	1	
3. 🗸 🗆 🗆	Unbroken lamps stored in closed, non-leaking containers or packages that are structurally sound and adequate to prevent breakage – 10 CSR 25-16.273(1) incorporating 40 CFR 273.13(d)(1).	2	
4. 🗸 🗆 🗆	Each lamp or lamp container or package marked or labeled clearly as "Universal Waste Lamp(s)" or "Waste Lamp(s)" or "Used Lamps" – 10 CSR 25-16.273(1) incorporating 40 CFR 273.14(e).	2	

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10. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	\$ 46 × 6. 3 × 0 × 7 × 1	
1 Spencer Dobbs	Safety Officer	Y/N
" NORA CAUNON	DIR DE TAMA	Y/N
3. Dennis Manlay	Director	Y/N
* DENISE LUCAS	Histology Coor	· Y/N
5. Joyce Duris	my	· Y/N
6. Donne Stokes	Pt. Sefety-IC	Y/N
1. Connie. Wilkins	Lah Director	Y/N
* Fawn Watson	Almin Pest Salety	Y/N
" DENISE DUMAN	PISOTEH MYN	Y/N
10. TRACEY REED	SPOKS Manager	Y/N
" Karen Adkins	inicallab 7010	Y/N
12 Ranch Ghersch	Educator 8261	Y/N
13. Randy Bechtel	Phasmany Dr 7206	Y/N
14. Sarah Boyd	Reclincoor	Y/N
15.		Y/N
16.	·	Y/N
17.		Y/N
18.		Y/N
19.		Y/N
20.		Y/N

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Species on the Secretary Section	Job Title	Cost Center	Mercy Clinic
Name (PRINT LEGIBLY)		Number	Co-worker?
net ferreign krieffer fil en krieffer en annerer verreig	FACILITIE	8103	YXY
1 GERRAGO MANAENCE	- FICTURE		YN
2 Keuin Fitzpatrick	EVS/GIII	9800	Y(N)
3	NP-H	ν.	- 1
SCOTT WATSON	m 10,18	)	Y/N/
Douge Townsell	20/000	Die	Y/N)
5. YOTH ZORN	Ga DIS	8261	Y/N
6 Sarah Boyd	Ralincoor		1/11
7 0 1 10 1 1	Dir Phama	7206	Y(N)
" Kandy Bechtel		626/	Y/X
8. Randy Wresch	BMETIII	1 70K	Y/N
" Karen Adkins	portoryta	ucator	Y/N
10. 7000 0 50 0 517	SPIVESIN	enages_	1.
TRACE REED	VISCOLO	M. TOXC	Y(N)
DEMISE DUTHIN	104	1 500	I/ Y/N
Fron Watson	Hamin, H	124 CXIII	Y/N
13. (Dage Wilkins	Lahlu	do	
14.	DI Solo	LIC	Y/N
¿ anna Stokes	17.200	7.	Y/N
15. State de la sono	1 mg	- 1870 B B - 1 - 18 - 18 - 18 - 18 - 18 - 18 -	970 Y/N
16. PENISE LUCAS	Histo Coo	2/28	· Y(N)
17. Dens Manley	Onecto-	7884	
18. 52.24 America	AZR	7/21	YN
NORA CHOROCO.	- <del> </del>	01.91	YN
19. MIKE WARDLOW	MGR	8681	Y/N
20.		<u></u>	

ATTACHMENT 5 Page 1 of

### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY CONFIDENTIALITY NOTICE

Facility Name St. Johns Berronal Medical Center
Facility Address
2727 Mcclelland Blud. Jophin, MO 6487947 64804
Inspector (print) Michael J. Martin
U.S. EPA, Region VII, 901 N. 5th St., Kansas City, KS 66101  Date  05/05/201
The United States Environmental Protection Agency (EPA) is obligated, under the Freedom of Information Act, to release information collected during inspections to persons who submit requests for that information. The Freedom of Information Act does, however, have provisions that allow EPA to withhold certain confidential business information from public disclosure. To claim protection for information gathered during this inspection you must request that the information be held CONFIDENTIAL and substantiate your claim in writing by demonstrating that the information meets the requirements in 40 CFR 2, Subpart B. The following criteria in Subpart B must be met:
<ol> <li>Your company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.</li> </ol>
2. No statute specifically requires disclosure of the information.
3. Disclosure of the information would cause substantial harm to your company's competitive position.
Information that you claim confidential will be held as such pending a determination of applicability by EPA.
I have received this Notice and <u>DO NOT</u> want to make a claim of confidentiality at this time.
Facility Representative Provided Notice (print)  Signature/Date  5/5/11
I have received this Notice and <u>DO</u> want to make a claim of confidentiality.
Facility Representative Provided Notice (print) Signature/Date
Information for which confidential treatment is requested;
- 6e

(Rev: 11/15/99)

ATTACHMENT b Page of

### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY RECEIPT FOR DOCUMENTS AND SAMPLES

Facility Name St. Johns Regional Medical Center
2727 McClelland Blvd. Jophn, NO 64804 64804
Documents Collected? YES (list below) NO
Samples Collected? YES (list below) NO Split Samples: YES NO
Documents/Samples were: 1)Received no charge 2)Borrowed 3)Purchased
Amount Paid: \$ Method: Cash Voucher To Be Billed
The documents and samples described below were collected in connection with the administration and enforcement of the applicable statute under which the information is obtained.
Receipt for the document(s) and/or sample(s) described below is hereby acknowledged:    Methics   Proposition   Staphylococcus aureus (MISA) Lab Protective (Pages)
2) 10% Formalin minterial safety data sheet (MSDS) (Topans)
3) Kpert MRSA MSDS (10 pages)
+) Barrum Sulfate Parter MSDS (3 proces)
5) 2009-2011 (Iniform Hazardous Waste Manifests (19 Doags)
6) Spectra MRSA MSDS (Hpages)
7) Campus Map (2 pages)
8) Facility Layout (I page)
9) Lexité NF MSBS (4 pages)
10) 3M Chemical Integrator 1243 MSOS (Opages)
11) 3M 1248 Gas Plasma Chemical Indicator Strip (1) pages -MSDS
12) Steris Chemical Indicator Strip LCCOBB (11565 (1 page)
12) SM 1228 Indicator Tape (MSS) (" lages)
15) 30 Resonated all Talkets Tope (1222) MSOS (8 pages)
15) 3M Response Letter to Indicator Tape Lead content (3 pages)
Signature/Date Spencer Jobbs Signature/Date 5/5/11
Inspector (print)  Signature/Date  Signature/Date  OS/OS/2011
U.S. EPA, Region VII, 901 N. 5th Street, Kansas City, KS 66101
ATTACHMENT Page of

	jonal Medical Center	
Address: 2727 Mc Clellon	04 Thu 5/5/11 64804	
EPA ID Number: MOD 07626250		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	to the following areas of noncompliance with state and federal regulations. Forder (Administrative Civil Complaint) pursuant to Section 3008 of RCRA ations resulting from the the inspection.	
Citation	Description of Violation	
HOGER Z62.11	Hozordous waste determinations not conducted:  (A) Waste pharmaceuticals (partially used, etc.)	
TOOK SUNIT	generated in the Pharmacy sent to EXP and/or	
	(B) Partially used/patient Contacted Cirugs/chemicals	
	Epors or sent to the Pharmacy (both disposed with	
	(c) Chemotherapy waste (cteanup debris, gloves,	
	(D) Used Chemotheraphy hood Filters	
	(E) Spent 3M 1222 indicator tape ( brolls per week)	
include a description of all corrective action.  The response should be submitted to:  U. S. Env.  Gold  Lagran	vironmental Protection Agency, Region VII  North 5th Street  The Charles Contact of this notice. Your response should be taken and/or a schedule for completing the necessary corrective actions.	
	or wish to discuss your response, you may call me at  (Compliance Officer) at	
This Notice prepared by Mchael	5. Martin Date: 05/05/2011	
The undersigned person acknowledges that he/she has received a copy of this Notice and has read same.		
Printed N Signature Title:		
	Page of	
ATTA	ACHMENT_B Pageof	

D: Facility Name:		
Address:		
EPA ID Number:		Date:
is notice does not constitute	e a compliance orde	ne following areas of noncompliance with state and federal regulations. er (Administrative Civil Complaint) pursuant to Section 3008 of RCRA as resulting from the the inspection.
Citation		Description of Violation
	(F	5) Rags contaminated with lead solder (Stob per y
10 CSR 25-5. Z62(2		acility notification not current (zip code and she contact information)
11517	040CFR F	Hazardous waste Strage container not marked with
2.34(d)(4) referencing	* 1	he date of accumulation  (A) one full I gallon storage container of Whole Xylene
	40 CFR	Hozardous Waste Storage Contemer not Marked "Hozardon (A) Same Container in Citation # 3.
	rrective actions tak itted to:	within 14 calendar days of receipt of this notice. Your response should ten and/or a schedule for completing the necessary corrective actions.  mental Protection Agency, Region VII
you have any questions abo	ATTNout this Notice or w	rish to discuss your response, you may call me at
000	, or	(Compliance Officer) a
nis Notice prepared by	hohael I. Ma	Date: 05/05/2011
ne undersigned person ackn	owledges that he/sh	he has received a copy of this Notice and has read same.
	Printed Name: Signature: Title:	Spencer Dobbs Date: 5/5/11 Safety Officer
		Page 2 of 1
	ATTACH	HMENT B Page Z of T

O: Facility Name:		
Address:		
EDA ID Monther		D.
EPA ID Number:		Date:
	order (Administrative Civil	ncompliance with state and federal regulations. Complaint) pursuant to Section 3008 of RCRA inspection.
Citation		Description of Violation
10 CSR 25.5.262 (2)(c)2.C(1)+(1)		waste inspections (storage containers). d From 09/20/2010 to present.
10 CSR 25-5.262(2)2:C(1)		tions (Spills, handling, etc.) of age Area not conclucted.
10 CSR 25-16.273(1) => 40 CFR 273.15(c)	The length of time	e of universal waste accumulation
		pent Fluorescent lamps (at least 178
	The state of the s	
The response should be submitted to:	ronmental Protection Agend	cy, Region VII
	-/	
ATTN.		
f you have any questions about this Notice of	or wish to discuss your respo	onse, you may call me at(Compliance Officer)
This Notice prepared by	2. Martin	Date: 05/05/2011
The undersigned person acknowledges that h	e/she has received a copy of	f this Notice and has read same.
Printed Na Signature: Title:	me: Spencer D Safety Offi	Dobbs Date: 5/5/11
	Page 3of	
ATTA	CHMENT Page 3	_of_4_

TO: Facility Name:		
Address:		
EPA ID Number:	Date:	
This notice is provided to call your attention to the following areas of noncompliance with state and federal regulations. This notice does not constitute a compliance order (Administrative Civil Complaint) pursuant to Section 3008 of RCRA and may not be a complete listing of all violations resulting from the the inspection.		
Citation	Description of Violation	
8) 10 CSR 25-16-273W7 40 GRL273.16	Emplayers not trained regarding proper Management of universal waste Clamps)	
9) DCSR 25-16.273(1)+40CFR 273.13(a)(1)	Universal wistellamps) not stored in a closed Container. (A) Same Containers listed in Citation #7.	
10/10csr 25-16,273(1) = 40 CFR 273,14(e)	Universal wastellamps) not labeled as "Universal Waste- Lamps," "Waste Lamps," or "Used Lamps."	
	se within 14 calendar days of receipt of this notice. Your response should taken and/or a schedule for completing the necessary corrective actions.	
The response should be submitted to:	taken and/or a senedule for completing the necessary corrective actions.	
U. S. Envi	ronmental Protection Agency, Region VII	
ATTN_		
	r wish to discuss your response, you may call me at	
, or	(Compliance Officer) at	
<u> </u>		
This Notice prepared by	Martin Date: 05/05/2011	
The undersigned person acknowledges that h	e/she has received a copy of this Notice and has read same.	
Printed Na	me: Spencer Dobbs Date: 5/5/11	
Signature:	Safety Officer	
*	2 2	
ATTAOL	Page _ of _ 4	
ATTACH	IMENIPageof	

#### Procedures for Inspectors performing Site Visits

If the facility wants to make a change, they must complete a Notification of Regulated Waste Activity form # MO780-1164, and send it to the Department of Natural Resources, Waste Management Program, PO Box 176, Jefferson City, MO 65102. The form can be found at http://www.dnr.mo.gov/forms/780-1164.pdf

If during the course of the site visit, the inspector/investigator becomes aware of any changes which should be made to the information printed on this form, please make the corrections and return the form to: Beth Koesterer, AWMD/WEMM.

EPA	DCDA	TD	Number:
ii F F	NUNM	10	Number:

MOD076262500

Name of Company/Site:

ST JOHNS REGIONAL MEDICAL CTR

Location of Site:

2727 MCCLELLAND BLVD JOPLIN, MO 64804

JASPER County 06 State District

Land Type:

Other land type

NAICS:

62211 - GENERAL MEDICAL AND SURGICAL HOSPITALS

Mailing Address:

2727 MCCLELLAND BLVD

JOPLIN, MO 64804

Spencer Dobbs, Safety Office

Site Contact: Job Title:

DAVID WATT, DIRECTOR OF ENVIRONMENTE SORVIEDS

Address:

2727 MCCLELLAND BLVD

spencer.dobbs@mercy.net

Email:

Phone Number:

JOPLIN, MO 64804 DGABRIELUSTJ.COM

(417) 625-2114 / 2363 2007

Current Owner of Site:

Phone Number: Owner Type:

Catholic health initiatives—Sistes of Marty

<del>< (303) 298-9100</del> -314.579.6160

Private

Current Owner of Site:

Owner Type:

SISTERS OF MERCY

Private

Current Operator of Site:

Phone Number: Operator Type: -CATHOLIC HEALTH INITIATIVES SISTERS OF MORY

-(303)298-9100

714.579.6100 Private

TYPE(S) OF REGULATED ACTIVITY: Federal Small Quantity Generator

Hazardous Wastes Handled:

D001

D008

F003

1st N 08/19/80 N 01/27/06 2

Certified by Notification

on 01/27/06 by

CARRIE WARD 01/27/06 ENVIRON SERVICES MGR

Name of Inspector (Please print): \(\frac{\fir\f{\frac{\fir\f{\f{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\ (Check one): ☐ EPA R7 ENSV ☐ EPA R7 Contractor ☐ NOWCC/SEE Investigator

Signature of Inspector:

ATTACHMENT.

Pie	se pri	nt or type. (Form designed for use on elite (12-pitch) typewriter.)						Approved.	OMB No. 2	050-0039
1		ORM HAZARDOUS WASTE MANIFEST (Continuation Sheet) 21. Generator ID Number (Continuation Sheet)	e2500	22. Page	23. Marilfe	est Tracking Nur SOUS	\$40	$\mathcal{N}_{\mathcal{V}}$	<b>E</b> S	
	24. G	enerator's NameSt.Ophno								
	25 7	ransporter Company Name				U.S. EPA ID N	lumber	-G F		
	<u> </u>	ransporter Company Name				U.S. EPA ID I	Number C	<u> </u>	<u>375</u>	207
П	20. 1	ransporter Company Name				1	· · · · · · · · · · · · · · · · · · ·			
	27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		28. Contai	iners Type	29. Total Quantity	30. Unit Wt./Vol.	31. V	/aste Codes	
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	32. 5	pecial Handling Instructions and Additional Information								
Ē	33. Ti	ansporter Acknowledgment of Receipt of Materials	Signature	11 - 4:	. 1	_1		Mor	ith Day	Year
TRANSPORTER	<u> </u>	ONESSO HOTSTED ansporterAcknowledgment of Receipt of Materials	10	uttope	Hec	<u>⊃,</u>		عَالِ	74	111
TRAN	Printe	d/Typed Name	Signature					Mor	nth Day	Year
<u></u>	35. D	iscrepancy								
DESIGNATED FACILITY					•				•	
NATEC	36. H	azardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatn	nent, disposal, and re	cycling systems)	······································	<del></del>	<del></del> 1			
DESIG	<del> </del>			1				•		
EP/	Form	8700-22A (Rev. 3-05) Previous editions are obsolete.	DESIG	NATED FA	ACILITY 1	TO DESTIN	ATION	STATE (	IF REQ	UIRED)

Ple	ase print or type. (Form design	gned for use on elite (12-pitch) type:	writer.)					Form	Approved	OMB No.	2050-003
	UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number  MOD 0 7 8 2 8 2 5		4 /07	ergency Response 7) 818-0087		4. Manifest	በለኝ	8.80	1 V	ES
	5. Generator's Name and Malif	ing Address ST, JOHNS RE	GIONAL MEDICAL AND BOULEVARD	CTR ST.	tor's Site Address JOHNS RE	(if different the	nan mailing addres LMEDICAL	S) CTR			
			AND BOULEVARD 1804	(AT 272	TN: KEVIN 7 MCCLELI	AND BO	TRICK) DULEVARD	ı			
$\parallel$	Generator's Phone: 417 &			JOI	PLIN, MO 8	4804	U.S. EPA ID N	lumber			
		NICAL SOLUTIONS							0 8 3	1 3	6 9
	7. Transporter 2 Company Nar						U.S. EPAID N		00	na i	
	B. Designated Facility Name a	Trad Tra	CHNICAL SOLUTION	ONS	· · · · · · · · · · · · · · · · · · ·		U.S. EPAID N		ממני		<del></del>
		HIGHWAY 73	F TAYLOR'S BAY					• .			
11	Facility's Phone: 409 7	36-2821 PORT ARTHUR	₹, TX 77840				TXC	0.0	083	88	6 q
	9a. 9b. U.S. DOT Descript HM and Packing Group (if	tion (including Proper Shipping Name, Ha any))	zard Class, ID Number,	•	10. Contai	~	11. Total Quantity	12, Unit Wt./Vol.	13.	Waste Code	35
	1-NON DECL	ATED MATERIAL, NON-R	CRA NON-DOT		NO.	Туре	Quantity	1113101.	NONE		Γ
ENERATOR	(FORMALIN 4	4-10%)			0 1 5	DF	00800	P		OUTS	2191
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	4.										
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<u>:  </u>	14. Special Handling Instruction	ns and Additional Information 1) V	V:954351 A:PTAVES	3020 15DF	- - ER Ser	vice Con	tracted by V	ESTS		,	
'					. 0					12	11
•	15. GENERATOR'S/OFFERO	OR'S CERTIFICATION: I hereby declare	that the contents of this consi	nment are fully			by the proper shi		, and are cla		aged,
	Exporter, I certify that the	arded, and are in all respects in proper co contents of this consignment conform to	the terms of the attached EPA.	Acknowledgege	nt of Consent.	•	-	If export sh	ipment and I	am the Prim	iary <sub>1</sub>
	Generator's/Offerer's Printed/T	nimization statement identified in 40 CFR	262.27(a) (if I am a large quar	Signature	or (b) (if I am a sma	ill quantity ge	nerator) is true.	,	Mos	nth Day	Year
Į.	16. International Shipments	harger		Tar	u 11/4	una	vige			2 2 (	<u>alı o</u>
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	18. Discrepancy	<u> </u>		1111	mon		wwo			<u>ر</u>	_ <u></u>
	18a. Discrepancy Indication Sp	oace Quantity	Туре	•	Residue		Partial Reje	ection		Full Rej	ection
					fanifest Reference	Number:	-			١	
DESIGNATED FACILITY	18b. Alternate Facility (or Gene	erator)		٠	•		U.S. EPAID N	umber			
FAC	Facility's Phone:			•			1				
ATE	18c. Signature of Alternate Fac	ality (or Generator)	•			•			M	nth Day	y Year
SIG	19. Hazardous Waste Report N	Management Method Codes (i.e., codes fo	or hazardous waste treatment,	disposal, and re	cycling systems)			<del>-</del> -			
ă	" HOLL			3.	* .		4.				
Ш		or Operator: Certification of receipt of haz	rardous materials covered by t	ne manifest exc	ent as noted in Item	n 18a			-		
				Sland	<i>A</i>				Ma	יייפוו חלצת	/ Year
$\left \right $	Printed/Typed Name	Dugo	8	Signatur	7	dol	De	00	<b>)</b>		Year

ATTACHMENT 10 Page 3 of 19

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

print or type. (Form designed for use on elite (12-pitch) typewriter.)  NIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)  1. Consents to Name	22. Page	23. Man	fest Tracking Nu		Approved, OMB No	2
St. Johns						
5. Transporter 3_ Company Name Vew La ES		-	U.S. EPAID	SDC	80631	3
. Transporter Company Name	· ·		U.S. EPA ID	Number		
a. 27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Conta	iners Type	29. Total Quantity	30. Unit Wt./Val.	31, Waste Cod	es
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Discrepancy	· · · · · · · · · · · · · · · · · · ·					
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. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and	recycling systems)		1			
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rm 8700-22A (Rev. 3-05) Previous editions are obsolete.	IGNATED FA	CILITY	TO DESTIN	IATION	STATE (IF RE	QUIF

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Ple	ase p	rint or type. (Form desig				18 I SB 18 I II I				Form	Approved.	OMB No.	2050-0039
1	V	FORM HAZARDOUS VASTE MANIFEST		<sup>лгы</sup>		age 1 of 3. Eme	7)818	3-00	37 00		70 <u>4</u>	1 V	ES_
	5. G	enerator's Name and Mailir	ng An <del>ddolesco (D. 19</del> S 27 17	TOPUN MO 6480	NAL MERICA	LCTR ST.	JOHNS TN: KEV	REGION N FITZP	than mailing addres AL MEDICAL ATRICK)	s) .CTR			
		erator's Phone: 417 (	325-2114	JI 610, INC 0400		JOF	LIN, MO	64804	BOULEVARD				
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$\ $	P	TAVES020 14DF	-J- ER Servi	ce Contracted by	VESTS		-, · · · · ·				.,		
						6	evid @	()	. A TWI 1	SO DA		18/01	in Px
	15.	GENERATOR'S/OFFERO		III: I hereby declare that the spects in proper condition		signment are fully a	and accurately	described ab	ove by the proper sh	ipping name	e, and are clas		
П			contents of this cons	signment conform to the ter	ms of the attached EPA	A Acknowledgmen	of Consent.		_				,
$\ $	Gen	erator's/Offeror's Printed/Ty				Signature			.610		Mor	nth Day	1
	16.1	INTERIOR Shipments	LM'AS		· []_		Mile		1CD				<u>/  ' ' '</u>
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1	UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)  21 Generator ID Number (2) 4250	22. Page	23. Mant	est Tracking Nu	<b>1</b> 204	ILES
	24. Generator's Name St. Johns.					
	25. Transporter 5 Company Name Valla ES			U.S. EPAID	Number XXX	0313Le9
	26. Transporter Company Name	·		*U.S. EPA ID	Number	
	27a. 27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Conta No.	iners Type	29. Total Quantity	30. Unit Wt./Vol.	. 31. Waste Codes
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ATTACHMENT 10 Page 6 of 19

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved, OMB No. 2050-0039 Manifest Tracking Number 000387042 1. Generator ID Number 2. Page 1 of 3. Emergency Response Phone UNIFORM HAZARDOUS WASTE MANIFEST MOD 0 7 6 2 6 2 5 0 0 (877) 819-0087 5. Generator's Name and Mailing Address enerator's Site Address (if different than mailing address)
ST. JOHNS REGIONAL MEDICAL CTR
(ATTN: KEVIN FITZPATRICK)
2727 MCCLELLAND BOULEVARD
JOPLIN, MO 84804 Generator's Phone: 417 625-2114 6. Transporter 1 Company Name U.S. EPA ID Number NJD 0 8 0 6 3 1 3 6 9 **VEOLIAES TECHNICAL SOLUTIONS** 7. Transporter 2 Company Name U.S. EPA ID Number 8. Designated Facility, Name and Site Address VEOLIA ES TECHNICAL SOLUTIONS U.S. EPA ID Number 7 MOBILE AVENUE 618 271-2804 SAUGET, IL 62201-1069 110098642424 Facility's Phone: 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, 10. Containers 9a: 12. Unit 13. Waste Codes and Packing Group (if any)) Quantity WL/Vol. Туре 1: UN1479, WASTE OXIDIZING SOUD, n.o.s., (SODIUM D001 IODATE), 5.1, 1 0 0 DF 00005 P 2-UN2923, CORROSIVE SOLIDS, TOXIC, n.o.s., (OXALI) NON ACID), 8 (8.1), III p, 0 0 1 00005 D.F UN3280, CORROSIVE SOLID, ACIDIC, INORGANIC, n.o.s., (BORIC ACID, ALUMINUM SULFATE (SOLID)). NON 00006 P 0 0 1 DF 8.111 ā, 4. Special Handling Instructions and Additional Information 1),W.43816 A:TW043816 2) W.43816 A:TW043816 3) W.43818 A:TW043816 4- ER Service Contracted by VESTS GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. ... I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. Generator's/Offeror's Printed/Typed Name 1 0 0 Port of entry/exit: Import to U.S. Export from U.S. Transporter signature (for exports only): Date leaving U.S.: 17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Month Day sporter 2 Printed/Typed Name 18. Discrepancy 18a. Discrepancy Indication Space Full Rejection Quantity \_l Type Residue Partial Rejection Manifest Reference Numbe 18b. Alternate Facility (or Generator) U.S. EPA ID Number Facility's Phone: 18c. Signature of Alternate Facility (or Generator) Yea 19. Hazardous Waste Report Management Method Codes (I.e., codes for hazardous waste treatment, disposal, and recycling systems) 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Ibm 182

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete

Printed/Typed Name

**ATTACHMENT** Page. DESIGNATED FACILITY TO GENERATOR

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ATTACHMENT 10 Page 8 of 19

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2. Page 1 of

(877) 818-0087

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

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19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

18b. Alternate Facility (or Generator)

18c. Signature of Alternate Facility (or Generator)

Facility's Phone:

Printed/Typed Name

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS

**WASTE MANIFEST** 

1. Generator ID Number

MOD076262500

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

U.S. EPAID Number

Month

106 104

Day

Day

639402

4. Manifest Tracking Number 0003881

Form Approved. OMB No. 2050-0039

Manifest Reference Number:

e print or type. (Form designed for use on elite (12-pltch) typewriter.)	1000	T 25 14 1		Form	Approved. OMB No. 20	050
UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)  21. Generator's Name  22. Generator's Name  23. Generator's Name	22. Page	23. Man	1 () S	181-	71 VES	
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			U.S. EPA ID	Number		_
25. Transporter Company Name \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	•		NJI	XX	Le 313209	2
26. Transporter Company Name			U.S. EPAID	Number		
27a, 27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number,	28. Conta	iners	00 7-1-1	20 11-31		
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5. Discrepancy				*	•	
36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, an	recycling systems) I			1		
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Type Quantity WEVEL  X 1-UN2924, WASTE FLAMMABLE LIQUIDS, CORROSIVE.  No. Type Quantity WEVEL  13 DF 65 P DODA C  DODA C  Y 2-NA3082, HAZARDOUS WASTE, LIQUID, n.o.s., (FORMALIN, 410%), 9, III	3 8 9
STJOHN'S REGIONAL - LAB ATTN: 3727 MCCLELLAND BLVD Generator's Phone: 417 625-2114 6. Transporter 1 Company Name VEOLIA ES TECHNICAL SOLITIONS 7. Transporter 2 Company Name Triad Transporter 2 Company Name U.S. EPAID Number U.S.	R R R R R
6. Transporter 1 Company Name  VEOLIA ES TECHNICAL SOLUTIONS  7. Transporter 2 Company Name  WEOLIA ES TECHNICAL SOLUTIONS  8. Designated Facility Name and Site Address  VEOLIA ES TECHNICAL SOLUTIONS  HIGHWAY 73  3.5 MILES W. OF TAYLOR'S BAYOU  Facility's Phone: 400 738-2821 PORT ARTHUR, TX 77640  9a. 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))  X 1 UN2824, WASTE FLAMMABLE LIQUIDS, CORROSIVE, DODAL CORROSIVE, CORROSIVE, (FORMALIN, XYLENE), 3 (8), III  X 2 NA 30R2, HAZARDOUS WASTE, LIQUID, D.O.S., (FORMALIN 4-10%), 9, III  15 DF 75  P 0001	R R R R R
7. Transporter 2 Company Name    Transporter 2 Company Name	R R R R R
8. Designated Facility Name and Site Address  VEOLIA ES TECHNICAL SOLUTIONS  HIGHWAY 73  3.5 MILES W. OF TAYLOR'S BAYOU  Facility's Phone: 409 738-2821 PORT ARTHUR, TX 77840  9a. 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))  X 1-UN2924, WASTE FLAMMABLE LIQUIDS, CORROSIVE, R.O.S., (FORMALIN, XYLENE), 3 (8), II  X 2-NA3082, HAZARDOUS WASTE, LIQUID, p.o.s., (FORMALIN 4-10%), 8, III  15 DF 75  P 0001 C	3 S Q B
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1) ERG:132 W:805199 A:PTAVES100 14DF 2) ERG:171 W:983400 A:PTAVES100 14DF 2) ERG:171 W:983400 A:PTAVES100	14DF
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified.	IL TO RK
marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.  I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.	
Generator's/Offeror's Printed/Typed Name , Signature Month	Day Year
Sevin Stephatical   16. International Shipments   Import to U.S.   Export from U.S.   Port of entry/exit:   Date leaving U.S.:	1 6 1 0
Transporter 1 Printed/Typed Name MITCH BURGER Transporter 2 Printed/Typed Name Signature Worth Transporter 2 Printed/Typed Name Month Transporter 2 Printed/Typed Name Month Transporter 3 Printed/Typed Name Month Transporter 4 Printed/Typed Name Month T	Day Year
Transporter 2 Printed/Typed Name Anthony Payne Signature You've 14	Day Year
18. Discrepancy	Full Delegation
Type   Residue   Partial Rejection   Manifest Reference Number:	Full Rejection
Facility's Phone:	
18b. Alternate Facility (or Generator)  Facility's Phone:  18c. Signature of Alternate Facility (or Generator)  Month  19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)  1. 2. 3. 4.	Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)  1.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a	
Pante Typed Name  EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.  DESIGNATED FACILITY TO DESTINATION STATE (IF	h Majo

ATTACHMENT 10 Page 14 of 19

Plea	se pri	nt or type. (Form designed for use on elite (12	-pitch) typewriter.)					Form	Approved. OMB No.	2050-0039
1	UNIF	ORM HAZARDOUS WASTE MANIFEST 2	. Generator ID Number	250	22. Page	23. Manife	st Tracking Nur			$\sum$
	24. G	enerator's Name St. John	S.	· · · · · · · · · · · · · · · · · · ·						
	25. 1	enerator's Name  St. Sohn: ransporter 3 Company Name Vec	l'aES				U.S. EPAID N	lumber	JE3136	9
	26. T	ransporter Company Name					U.S. EPA ID N	lumber		
	27a. HM	27b. U.S. DOT Description (including Proper Shippin and Packing Group (if any))	ng Name, Hazard Class, IO Number,		28. Contain No.	ers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes	
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$\dashv$	35. Di	screpancy			· · · · ·			•	· ]	
DESIGNATED FACILITY			·							
SIGNAT	36. Ha	zardous Waste Report Management Method Codes	(i.e., codes for hazardous waste treatment, d	isposal, and recy	king systems)			1		
	Form	8700-22A (Rev. 3-05) Previous editions are of	bsglete.	DESIGN	IATED FA	CILITY TO	O DESTIN	ATION S	STATE (IF REQ	UIRED)

ATTACHMENT 17 Page 5 of 19

Plea	se prii	int or type. (Form desig	ned for use	on elite (12-	pitch) typewrite	r.)						Q		n Approved	OMB No.	2050-0039
<b>†</b>		FORM HAZARDOUS ASTE MANIFEST	1. Generato				2. Page 1 of		•		Phone	4. Manifest		593	5 V	EQ
		nerator's Name and Mailin	I M O D ng Address	_	6250		. 1	(877) 8 Generator's			(if different t	han mailing addre		.000	<u> </u>	LO
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	8. Des	signated Facility Name an	d Site Addres		ran:	sport	atsor	ι				U.S. EPAID		158	20	1 (
		tys Phone: 409 73		VEOLIA HIGHWA 3.5 MILE	\Y 73	IICAL SOLU AYLOR'S B ( 77840								083	88(	3 6
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	15. (	GENERATOR'S/OFFERO	R'S CERTIFI	CATION: I her	eby declare that	the contents of this	s consignment a					ve by the proper sh				og (kc.
	£	marked and labeled/placar Exporter, I certify that the	contents of th	is consignment	conform to the to	erms of the attache	ed EPA Acknowl	edgment of	Conser	ıt.	•	·	. If export st	nipment and I	am the Prima	ary
		certify that the waste min rator's/Offeror's Printed/Ty		_				rator) or (b)	(IT I am	a sma	ii quantity g	enerator) is true.		Мо	nth Day	Year
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	16a. U	Discrepancy Indication Spa	ice	Quantity		Туре		Ш	Residue	9	•	Partial Rej	ection		Full Reje	ection
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ED F		y's Phone: Signature of Altemate Facil	ity (or Genera	ator)										Mo	onth Day	Year
DESIGNATED FACILITY	40.11-							4				·····				1
DESI	19. Ha 1.	azardous Waste Report M	anagement M	2.	.e., codes for haz	ardous waste trea	ument, disposal	, and recycle	ig systi ( <del> </del>	ems)		4.				
	20 Da	esignated Facility Owner o	r Onerstor C	ertification of ~	ceint of hazanta	is materials associ	red by the macif	ITU est event e	<u>W</u>	J in Itaa	182				·	
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<b>₩</b>	Form	8700-22 (Rev. 3-05) F	Previous edi	tions are obs	Dete	<u> </u>		ESIGN		华	<u>uc</u>	TO DESTIN	ATION	CTATE	<u> </u>	P 7

ATTACHMENT 10 Page 16 of 19

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Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 1. Generator ID Number 2. Page 1 of 3. Emergency Response Phone UNIFORM HAZARDOUS 000325923 WASTE MANIFEST MOD 0 7 6 2 6 2 5 0 0 (877) 818-0087 5. Generator's Name and Malling Address Generator's Site Address (if different than malling address) ST. JOHN'S REGIONAL - LAB SAME Generalor's Phone:417 625-2112 6. Transporter 1 Company Name U.S. EPA ID Number IN J D 0 8 0 6 3 1 3 6 9 'EOLIA ES TECHNICAL SOLUTIONS U.S. EPAID Number 7. Transporter 2 Company Name Services colla 8. Designated Facility Name and Site Address VEOLIA ES TECHNICAL SOLUTIONS HIGHWAY 73 3.5 MILES W. OF TAYLOR'S BAYOU PORT ARTHUR, TX 77840 409 738-2821 7 X D Q Q Q 8 3 8 8 Q 6 Facility's Phone: 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, 10. Containers 12. Unit 11. Total 13. Waste Codes нм and Packing Group (if any)) Quantity Wt. Nol. Туре UN2924, WASTE FLAMMABLE LIQUIDS, CORROSIVE, FQQ3 n.o.s., (FORMALIN, XYLENE), 3 (8), II aat P DOOL OUTS2(18H DF 00015 GENERA U122 WASTE, LIQUID, n.o.s., Х (FORMALIN 4-10%), B, III P OUTS2(191 0 0 7 ID F 00140 NA3082, HAZARDOUS WASTE, LIQUID, n.o.s., U122 (FORMALIN 4-10%), 9, 111 DF ₽ Q Q 7 00210 OUTS2191 14. Special Handling Instructions and Additional Information 1) W:805199 A:PTAVES020 05DF 2) W:963400 A:PTAVES100 05DF 3) W:963400 A: PTAVES100 14DF -J- ER Service Contracted by VESTS 8-26-09\_IN at 1W1 10-Da GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and tabeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and t am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. Generator's/Offeror's Printed/Typed Name Signature Month Dav Year 5 **0** arer Port of entry/exit: Transporter signature (for exports only): Date leaving U.S. 17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name 108 18. Discrepancy 18a. Discrepancy Indication Space Quantity Птуре Residue Partial Rejection Full Rejection Manifest Reference Number: 18b. Alternate Facility (or Generator) U.S. EPA ID Number Facility's Phone: 18c. Signature of Atternate Facility (or Generator) Month Day 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 20. Designates Facility Owner or Operator; Certification of receipt of hazardous materials covered by the manifest except as noted in Item 48a EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Ple	ase	print or type. (Form designed for use on elite (12-pitch) writer.)				-			n Approved	, OMB No.	2050-0039
1		NIFORM HAZARDOUS 1. Generator 1D Number WASTE MANIFEST M C D 0 7 8 2 8 2 5 0 0	2, Page 1 of		rgency Response 818-0087	Phone .	4. Manifest	Tracking N	592	2 V	ES
	Ge	Generator's Name and Malling Address ST_VOHNIS REGIONAL - LAB ATTY ATTY ATTY OFFICE LAND BLVC JOPEN, MD 54804			or's Site Address	(If different th	an mailing addres	ss)			
	•	Transporter 1 Company Name OLIA ES TECHNICAL SOLUTIONS	•				U.S. EPAIDA		0 6 3	1 3 6	9
П		Transporter 2 Company Name			· .	**************************************	U.S. EPAID N				
	8.	Designated Facility Name and Site Address VEOLIA ES TECHNICAL SOLU W124 N9451 BOUNDARY RD.	TIONS				U.S. EPA ID N	lumber	**************************************	·	
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ATTACHMENT 10 Page 18 of 19

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M8089

FK00883

MSDS Name:

Catalog Numbers: R01821

Company Identification: Remelinc.

Lenexa, KS 66215

913-888-0939

(800)535-5053

Company Phone Number:

10/PK SPECTRA MRSA

12076 Santa Fe Trail Drive

InfoTrac Emergency Number:

InfoTrac Emergency Number, international:

nemei

Revision Date 2008-03-14

10/PK SPECTRA MRSA

**Material Safety Data Sheet** 

46009 201921 remei

Revision Date 2008-03-14

**Material Safety Data Sheet** 10/PK SPECTRA MRSA

Inhalation:

May cause respiratory tract irritation.

Chronic:

No information found

Section 4 - First Ald Measures

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, NIOSH (approved or equivalent), and full protective gear. During a fire, imitating and highly toxic gases may be generated by thermal decomposition or combustion. . .

Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature:

Not available

Explosion Limits:

Lower: Not available Upper: Not available

Flash Point:

Not available

NFPA Rating:

(estimated) Health: 1; Flammability: 0; Instability: 0

Section - West William Measures

General Information:

Use proper personal protective equipment as indicated in Section 8

Page 1

Page 2

1-352-323-3500 Section 2 - Composition, Information on " CAS# Coemics Name: Percent Not available 10/PK SPECTRA MRSA 100 Not available Section? - Hazards Identification **EMERGENCY OVERVIEW** Caution! May cause eye, skin, and respiratory tract irritation. This is expected to be a low hazard for usual industrial handling. No target organ information has been found. Potential Health Effects Eye: May cause eye irritation. Skin: May cause skin irritation. Ingestion: May cause irritation of the digestive tract.

Revision Date 200803-14

#### 10/PK SPECTRA MRSA

Spills/Leaks:

MSOS#

13033375

Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately. observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Provide ventilation.

Property of the control of the contr

Handlina:

Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage:

Store in a cool, dry, well-ventilated area away from incompatible substances.

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrationslow.

Exposure Limits

Chemical Name:

ACGIH

NIOSH

**OSHA** 

OSHA Vacated ኞ≤%

10/PK SPECTRAMRSA

None listed None listed None listed None listed

Personal Protective Equipment

Eyes:

Wear chemical splash goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure

· Respirators:

Arespiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use

Access to Property and Court of Property.

Physical State: No information found Color: No information found Odor: No information found

pH: No information found

VaporPressure: No information found

Vapor Density: No information found Evaporation Rate: No information found

Page 3

MSDS# 80:82:

remei

Material Safety Data Sheet

Revision Date 2008-03-14

10/PK SPECTRA MRSA

Section 1 Contract to 100 to 1

Viscosity: No information found Boiling Point: No information found

Freezing/Melting Point: No information found

position Temperature: No information found

Solubility In water: No information found Specific Gravity/Bensity: No information found

MolecularFormula: Mixture

Molecular Weight: No information found

Chemical Stability:

Stable under normal temperatures and pressures

Conditions to Avoid:

Excess heat

Incompatibilities with Other Materials

Strong oxidizing agents

Hazardous Decomposition Products

Hazardous Polymerization

Will not occur

RTECS:

No information found

LD50/LC50:

No information found

Carcinogenicity:

No information found

Epidemiology:

No information found

Teratogenicity:

No information found Reproductive:

No information found

Mutagenicity:

No information found

Neurotoxicity:

No information found

Other:

No information found

Revision Date

RECEM 201623

remel

**Material Safety Data Sheet** 

Revision Date 2008-03-14

10/PK SPECTRA MRSA

No information found

13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste, US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3. Additionally. waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRAP Series Wastes

None of the components are on this list.

RCRA U Series Wastes

None of the components are on this list.

US DOT

Canadian TDG

Proper Shipping Not Regulated Name:

Not Regulated

Hazard Class:

**UN** Number:

Packing Group:

Second 5 - Regulatory Information

US Federal

This products is not listed on the TSCA Inventory. Individual wmponents, however, may appear on the inventory The use of this product is restricted to research and development or FDA regulated activities.

Health and Safely Reporting List

None of the components are on this list.

Chemical Test Rules

None of the components are on this list.

TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

CERCLA Hazardous Substances and corresponding RQs

None of the components are on this list.

Page 5

MSDS#

R01821



**Material Safety Data Sheet** 10/PK SPECTRA MRSA

2008-03-14

SARA Section 302 Extremely Hazardous Substances

None of the components are on this list.

SARA Hazard Categories

Not available

SARA Section 313

None of the components are on this kwi

Clean Air Act - Hazardous Air Pollutants (HAPs)

None of the components are on this list.

Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

Clean Air Act -Class 2 Ozone Depletors None of the components are on this list.

Clean Water Act - Hazardous Substances

None of the components are on this list.

Clean Water Act \*Priority Pollutants

None of the components are on this list.

Clean Water Act - Toxic Pollutants

None of the components are on this list.

OSHA - Highly Hazardous

None of the components are on this list.

OSHA - Specifically Regulated Chemicals None of the components are on this list.

US State

State Right to Know

No information found

California Prop 65

None of the components are on this list.

California No Significant Risk Level

None of the components are on this list.

European/International Regulations

European Labelling in Accordance with EC Directives:

Hazard Symbols: None listed

Risk Phrases: None listed

Safety Phrases: S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

No information found

United Kingdom Occupational Exposure Limits

No information found

United Kingdom Maximum Exposure Limits

No information found

Canadian DSUNDSL

None of the chemicals in this product are listed on the DSUNDSLlist.

MSDS# £801821



**Revision Date** 2008-03-14

#### 10/PK SPECTRA MRSA

Canadian WHMIS Classifications

No information found
This product has been classified in accordance with the hazard criteria of the Controlled Products
Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

No information found

This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposel of product purchased from us, and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warmings provided with the product. Please consult your institution's policies regarding use of this product. If you have obtained this MSDS other was in connection with the supply of this product from us, this MSDS shouldbe consulted for general information only, and should not be relied upon two any purpose. As with the use of all hazardousmatenals, we wis me all instances to two the guidance of the MSDS provided or available with the specific product purchased.

Section City Consults

Micro



**Material Safety Data Sheet** 

Effective Date: February 2<sup>nd</sup>, 2010 Supercedes: October 19<sup>th</sup>, 2009 Xpert MRSA

# 1. Identification of the Material and Company/Undertaking

Product name:

Xpert MRSA

Catalog #: GXMRSA-100N-10

Common name:

Not applicable

GXMRSA-120

Compound name:

Not applicable

Manufacturer:

Telephone Numbers:

Cepheid

(888) 838-3222 (6 AM - 5 PM Pacific time US)

904 Caribbean Drive

Outside of the US: 1 (408) 541-4191

Sunnyvale, CA 94089

24-Hour Emergency Telephone: CHEMTREC (800) 424-9300

USA

Outside of the US: 1 (703) 741-5500 E-mail: techsupport@cepheid.com

The following MSDS is for the final finished product only as used in the laboratory that contains six (6) components, some of which are in cartridges. If manufacturing this product, consult the MSDSs for the individual ingredients and reagents.

### 2. Hazards Identification

Appearance:

Reagents Off Board Products (Reagents 1 & 2 in ampoules):

This product contains 6 parts - 3 of the parts (beads, which are freezedried white powders) are contained in cartridges. The other three components are reagents that are liquids that are clear, colorless liquids.

Reagents On Board Products:

This product contains 6 parts – 5 of the parts (3 beads, which are freezedried white powders, and 2 clear, colorless liquid reagents) are contained in cartridges. The other component is a reagent that is a clear, colorless liquid that that is contained in a vial.

Signal Word:

DANGER for handling of:

Reagent I containing Sodium Hydroxide

CAUTION for handling of all other kit components

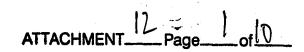
Hazard Overview:

Reagents Off Board Products (Reagents 1 & 2 in ampoules)::

Reagent 1 contains Sodium Hydroxide solution, which is a

CORROSIVE LIQUID. Causes burns to skin and eyes if directly

300-4673 Rev H





Effective Date: February 2<sup>nd</sup>, 2010 Supercedes: October 19<sup>th</sup>, 2009 Xpert MRSA

contacted. Causes irritation to mucous membranes and respiratory tract if inhaled.

Bead components (Bead 1; Bead 2; Bead 3) are contained in cartridges and will not present a hazard under normal use conditions; if cartridge is broken or damaged and beads are spilled or released, contact may cause reversible skin and eye irritation.

Elution Reagent contains guanidine thiocyanate which is considered toxic to the aquatic environment.

Reagent 2 is not considered hazardous under US hazard communication regulations (29 CFR 1910.1200), EU directives for classification and labeling of substances or mixtures or the Global Harmonization System for classification and labeling of substances or mixtures.

#### Reagents On Board Products:

Reagent 1 contains Sodium Hydroxide solution, which is a CORROSIVE LIQUID. Causes burns to skin and eyes if directly contacted. Causes irritation to mucous membranes and respiratory tract if inhaled. Reagent 1 is contained in the cartridge.

Bead components (Bead 1; Bead 2; Bead 3) are contained in cartridges and will not present a hazard under normal use conditions; if cartridge is broken or damaged and beads are spilled or released, contact may cause reversible skin and eye irritation.

Elution Reagent contains guanidine thiocyanate which is considered toxic to the aquatic environment.

Reagent 2 is not considered hazardous under US hazard communication regulations (29 CFR 1910.1200), EU directives for classification and labeling of substances or mixtures or the Global Harmonization System for classification and labeling of substances or mixtures. Reagent 2 is contained in the cartridge.

Statement of Known

Hazard:

Reagent 1 is a CORROSIVE LIQUID. Avoid skin contact, eye contact and inhalation. Wear eye protection and skin protection to avoid contact.



Effective Date: February 2<sup>nd</sup>, 2010 Supercedes: October 19<sup>th</sup>, 2009 Xpert MRSA

Elution Reagent is a hazard to the aquatic environment. Dispose of according to local, state and federal regulations.

Other components of this product would not be considered hazardous under normal conditions of use.

EU Indicator of Danger: Reagent 1 - C (Corrosive)

Elution Reagent - Xn; N (Harmful; Dangerous to the environment)

All other components of this product: Not applicable

EU Risk Phrases:

Reagent 1-R34 Causes Burns.

Elution Reagent – R 32 Contact with acids liberates very toxic gas R 52/53 Harmful to the aquatic environment; may cause long-term effects to the aquatic environment

All other components of this product: Not applicable

# 3. Composition Information on Ingredients

This product consists of a cartridge with three reagent beads to which aqueous reagents are added as part of an assay.

Bead 1 is a freeze-dried powder bead as contained in the cartridge with the following hazardous ingredients:

Ingredient	CAS#	EINECs / ELINCS #	% Composition	EU Risk Phrase
HEPES Acid and Salt	7365-45-9 (For Acid)	230-907-9 (For Acid)	<10	R36/37/38
Magnesium Chloride	7786-30-3	232-094-6	<5	R36/37/38
Tween 20	9005-64-5	200-315-5	<5	R36/37/38
Bovine Serum Albumin	9048-46-8	232-936-2	⋖	R42

All other ingredients of **Bead 1** are either non-hazardous under US and EU regulations or GHS guidelines and/or at concentrations less than 1% in the mixture.

Bead 2 is a freeze-dried powder bead as contained in the cartridge with the following hazardous ingredients:

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Effective Date: February 2<sup>nd</sup>, 2010 Supercedes: October 19<sup>th</sup>, 2009 Xpert MRSA

Ingredient	CAS#	EINECs / ELINCS #	% Composition	EU Risk Phrase
HEPES Acid and Salt	7365-45-9 (For Acid)	230-907-9 (For Acid)	<20	R36/37/38
Tween 20	9005-64-5	200-315-5	<5	R36/37/38 .

All other ingredients of Bead 2 are either non-hazardous under US and EU regulations or GHS guidelines and/or at concentrations less than 1% in the mixture.

Bead 3 is a freeze-dried powder bead as contained in the cartridge with the following hazardous ingredients:

Ingredient	CAS#	EINECs / ELINCS #	% Composition	EU Risk Phrase
HEPES Acid and Salt	7365-45-9 (For Acid)	230-907-9 (For Acid)	<10	R36/37/38

All other ingredients of Bead 3 are either non-hazardous under US and EU regulations or GHS guidelines and/or at concentrations less than 1% in the mixture.

#### Reagent 1 contains the following:

Ingredient	CAS#	EINECs / ELINCS #	% Composition	EU Risk Phrase
Sodium Hydroxide	1310-73-2	215-185-5	4%	R34 (for 4% solution)

Reagent 2 contains ingredients that are either considered non-hazardous under US and EU regulations or GHS guidelines and/ or at concentrations less than 1% in the mixture.

#### Elution Reagent contains the following ingredients

Ingredient	CAS#	EINECs / ELINCS #	% Composition	EU Risk Phrase
Guanidine thiocyanate	593-84-0	209-812-1	20-30	R20/21/22/32/52/53

All other ingredients in Elution Reagent are either non-hazardous under US and EU regulations or guidelines and/or at concentrations less than 1% in the mixture.

-300-4673 Rev-H-



Effective Date: February 2<sup>nd</sup>, 2010 Supercedes: October 19<sup>th</sup>, 2009 Xpert MRSA

### 4. First Aid Measures

### For Reagent 1:

Eye:

Flush thoroughly with water and notify supervisor and EHS personnel. Get

medical aid.

Skin:

Flush thoroughly with water and notify supervisor and EHS personnel. Get

medical attention.

Ingestion:

If swallowed, wash out mouth with water provided person is conscious. Never

give anything by mouth to an unconscious person. Get medical attention. Do not

induce vomiting unless directed to do so by medical personnel.

Inhalation:

Remove to fresh air and get medical attention for any breathing difficulty.

### For all other parts of the kit if contacted:

Eye:

Flush thoroughly with water and notify supervisor and EHS personnel. If an

irritation develops, get medical aid.

Skin:

Flush thoroughly with water and notify supervisor and EHS personnel. If an

irritation develops, get medical attention.

Ingestion:

If swallowed, wash out mouth with water provided person is conscious. Never

give anything by mouth to an unconscious person. Get medical attention. Do not

induce vomiting unless directed to do so by medical personnel.

Inhalation:

Remove to fresh air and get medical attention for any breathing difficulty.

# 5. Fire Fighting Measures

Flammability/Explosivity:

None of the components of the kit are considered flammable or

explosive.

Extinguishing Media:

CO<sub>2</sub>, multipurpose dry chemical or vaporizing liquid fire extinguisher.

#### Special Fire Fighting Procedures:

Wear full protective clothing and a self-contained breathing apparatus with a full facepiece operated in the pressure demand or other positive pressure mode for surrounding fire. Decontaminate all equipment after

use.

#### **Hazardous Decomposition Products:**

Elution Reagent may emit small quantities of cyanide in a fire.

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Effective Date: February 2nd, 2010 Supercedes: October 19th, 2009

Xpert MRSA

### Accidental Release Measures

#### For all components if spilled:

If product/material is released or spilled, take proper precautions to minimize exposure by using appropriate personal protective equipment. For small spills, wear gloves and absorb spill with paper towel. For small spills of Reagent 1 containing sodium bydroxide, avoid skin and eye contact by using rubber or nitrile gloves and wearing of eye protection to avoid contact. Dispose of material according to local, State and Federal waste disposal regulations (see Section 13).

For larger spills, wear personal protective clothing to minimize exposure such as overgarment, gloves and eye protection (goggles), cover spill with absorbent material. For larger spills of Reagent 1 containing sodium hydroxide, wear overgarment and personal protective equipment to avoid skin contact including goggles and rubber or nitrile gloves. Collect spilled material, absorbent, and rinse waters into suitable containers for proper disposal in accordance with applicable local, state or Federal waste disposal regulations (see Section 13).

## Handling and Storage

Handling Precautions:

Avoid skin contact, eye contact and inhalation.

Storage Requirements:

Store according to product labeling.

# **Exposure Controls/Personal Protection**

Occupational Exposure

Limits:

Reagent 1 contains sodium hydroxide which has ACGIH TLV and NIOSH REL of 2 mg/m<sup>3</sup> as a ceiling value not to be exceeded for any 15-minute period and an OSHA 8-hour time weighted average of 2 mg/m<sup>3</sup>. None of the other ingredients contained in this product have occupational exposure limits established by OSHA, NIOSH, ACGIH or Cepheid.

Engineering Controls: None normally required. When practicable, handle material in enclosed or contained processes or in processes with effective local exhaust ventilation.

Eye Protection:

Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and

potential for contact with eyes or face.

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Respiratory Protection: When possible, handle material in enclosed processes or containers. If it is

properly handled with effective ventilation or containment, respiratory protection

should not be needed.

Skin Protection: Rubber gloves are recommended to minimize potential for skin contact. In

laboratory setting, wear lab coat or other protective overgarment at a minimum to

minimize skin contact. Base the choice of protection on the job activity and

potential for skin contact.

Other: Facilities storing or using this product should be equipped with an eyewash

station and a safety shower. Wash hands, face and other potentially exposed areas

immediately after handling material (especially before eating, drinking, or

smoking). Decontaminate all protective equipment after use.

# 9. Physical and Chemical Properties

Physical State: Beads are solid components in cartridges; reagents are liquids which are

primarily buffered aqueous solutions.

Odor: Components are odorless.

Vapor Pressure: Minimal.

Evaporation Rate: Minimal.

Viscosity: Reagents are aqueous.

Boiling Point: Liquid reagents near 100 degrees C.

Freezing/Melting Point: Liquid reagents near 0 degrees C.

Solubility: Reagents are already aqueous; beads are soluble in aqueous solutions.

pH: >12.5 (Reagent 1); 6.6 - 8.6 (Solids & Other liquid reagents).

# 10. Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials.

Incompatibilities with Other materials: Strong oxidizing agents, peroxides, strong acids and

bases, acid chlorides, acid anhydrides, alkali metals, ammonia.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, nitrogen oxides,

sulfur oxides, sodium oxides, potassium oxides, hydrogen chloride, cyanide.

Hazardous Polymerization: Will not occur.

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# 11. Toxicological Information

Acute Toxicity: The cartridges containing freeze-dried powders should not present an acute toxicity hazard unless the beads are released or spilled. Magnesium chloride has low to moderate acute toxicity with oral LD50 of 2800 mg/kg in the rat. Sodium hydroxide is acutely toxic orally due to its corrosivity. Guanidine thiocyanate has an acute oral LD50 of 593 mg/kg. Tween 20 is not considered acutely toxic.

Irritation/Sensitization: HEPES Salt and HEPES acid are considered skin and eye irritants. Bovine serum albumin, as a foreign protein is considered a potential allergen but because it is contained in the bead within the cartridge, the potential to cause an allergic reaction under normal use conditions is considered low. Tween 20 is considered an irritant to the skin and eyes if contacted and respiratory tract if inhaled.

Repeated dose toxicity - No data identified on ingredients.

Reproductive (fertility) and Developmental (birth defects) toxicity – No data identified. None of the ingredients are considered reproductive or developmental toxicants.

Mutagenicity and Carcinogenicity – No data identified on mutagenicity. None of the ingredients are listed by NTP, LARC or OSHA as carcinogens.

# 12. Ecological Information

Ecotoxicity: Of the ingredients, guanidine thiocyanate is considered harmful to aquatic organisms. As sodium hydroxide adjusts pH, it has the potential to have harmful effects in the environment if not properly disposed of.

Environmental Fate: No data identified.

# 13. Disposal Considerations

Biological specimens, including used cartridges, should be treated as capable of transmitting infectious agents. Consult your institution's environmental waste personnel on proper disposal of used cartridges and unused reagents. This material may exhibit characteristics of federal EPA Resource Conservation and Recovery Act (RCRA) hazardous waste requiring specific disposal requirements. Check state and local regulations as they may differ from federal disposal regulations. Institutions outside the USA should check their country hazardous waste disposal requirements.

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# 14. Transport Information

Transport in accordance with all federal, state, and local transportation regulations.

With the exception of Reagent 1, all of the other components are not regulated by US DOT or IATA.

The transport classification of Reagent 1 contains 1.0N Sodium Hydroxide is: Class 8, Packing Group II, UN1824.

Proper Shipping Name: Sodium Hydroxide Solution.

# 15. Regulatory Information

US OSHA: This MSDS complies with the requirements under 29 CFR 1910.1200

Two of the components of the kit require labeling under either or both of US and EU regulations and therefore labeling of this product should contain the following.

For Reagent 1 - Contains Sodium Hydroxide Solution.



DANGER

Causes burns.

Keep out of reach of children.

In case of contact with eyes, rinse immediately with plenty of water and seek, medical advice.

Wear suitable gloves and eye/face protection.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

EU Risk and Safety Phrases: R 34: S2/26/37/39/45

For Elution Reagent - Contains Guanidine Thiocyanate





CAUTION

Contact with acids ilberates very toxic gas.
Harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment.
Avoid release to environment; refer to special instructions/Safety data sheets.

EU Risk and Safety Phrases: R 32; 52/53; S 61

LBL PN: 300-6924, Rev D

#### Canada - WHMIS Classifications

Reagent 1 is a Corrosive - Class E according to WHMIS classification.

All other components are not classified according to WHMIS classification criteria.

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California Proposition 65

None of the ingredients are listed under California Proposition 65.

SARA 313: Not listed.

CERCLA: Sodium hydroxide has a reportable quantity limit of 1000 lbs; no other ingredients are

regulated under CERCLA.

RCRA: Not listed.

For R&D consumers, products are to be used only for R&D purposes.

## 16. Other Information

No other data available.

Abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists

CAS#: Chemical Abstract Services Number

CFR Code of Federal Regulations

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

DOT: Department of Transportation

EINECS: European Inventory of New and Existing Chemical Substances

EU: European Union

GHS: Global Harmonization System

IARC: International Agency for Research on Cancer IATA: International Air Transport Association

OSHA: Occupational Safety and Health Administration

NTP: National Toxicology Program

RCRA: Resource Conservation and Recovery Act

SARA: Superfund Amendments and Reauthorization Act

TSCA: Toxic Substances Control Act

Cepheid makes no warranties as to the accuracy or completeness of this information and disclaims any liability in connection with its use. Cepheid's obligations shall be only as set forth in Cepheid's standard terms and conditions of sale for this product. In no case will Cepheid be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product.

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## St. John's Regional Medical Center Joplin, Missouri Laboratory Policy and Procedure

	Procedure Name: MRSA by PCR	
Section: Microbiology	Page 1 of 9	Procedure: MICRO-15.3
Developed: 04/13/10	Reviewed/Revised:	Effective Date: 05/10/10

PURPOSE: This procedure provides instructions for the performance of the Cepheid Xpert MRSA Assay using the GeneXpert Dx System. The Cepheid Xpert MRSA Assay performed in the GeneXpert® Dx System (Xpert MRSA) is a qualitative in vitro diagnostic test designed for rapid detection of methicillin-resistant Staphylococcus aureus (MRSA) from nasal swabs in patients at risk for nasal colonization.

**RESPONSIBILITY:** The Microbiology Shift Supervisor ensures that current instructions for procedures are written and reviewed to ensure testing and reporting consistency. The Shift Supervisor ensures that written procedures are readily available for consultation by the technical staff performing testing. The laboratory director signs and dates written procedures and changes to written procedures. When patient testing is performed, the Shift Supervisor ensures there is no random or inadvertent departure from defined procedures because of neglect or misunderstanding. Testing staff must follow written procedure. LD.04.05.09: The Lab Director is responsible for developing, implementing, and maintaining policies and procedures that guide and support the provision of services.

#### PRINCIPLE:

The GeneXpert® Dx System automates and integrates sample purification, nucleic acid amplification, and detection of the target sequence in simple or complex samples using real-time PCR and RT-PCR to detect MRSA DNA. The system requires the use of single-use disposable GeneXpert cartridges that hold the PCR reagents and host the PCR process. Because the cartridges are self-contained, cross-contamination between samples is eliminated. For a full description of the system, see the GeneXpert Dx System Operator Manual.

Xpert MRSA Assay includes reagents for the detection of MRSA as well as a sample processing control (SPC) to control for adequate processing of the target bacteria and to monitor the presence of inhibitor(s) in the PCR reaction. The Probe Check Control (PCC) verifies reagent rehydration, PCR tube filling in the cartridge, probe integrity, and dye stability.

### **CLINICAL UTILITY:**

The Xpert MRSA Assay is intended to aid in the prevention and control of MRSA infections in healthcare settings. The Xpert MRSA Assay is not intended to diagnose MRSA nor to guide or monitor treatment for MRSA infections. Concomitant cultures are necessary only to recover organisms for epidemiological typing or for further susceptibility testing.

Staphylococcus aureus (SA) is a major nosocomial pathogen that causes a range of diseases including endocarditis, osteomyelitis, toxic shock syndrome, food poisoning, carbuncles and boils. In the US today, MRSA is responsible for approximately 25% of nosocomial infections and reports of community-acquired MRSA are increasing, resulting in significant morbidity and mortality. Controlling MRSA is a primary focus of most hospital infection control programs. Currently, the standard surveillance method for detecting MRSA is culture, which is very laborious and time intensive. A rapid and more sensitive method for surveillance of MRSA will represent a definite advantage for infection control programs.

## St. John's Regional Medical Center Joplin, Missouri Laboratory Policy and Procedure

	Procedure Name: MRSA by PCR	
Section: Microbiology	Page 2 of 9	Procedure: MICRO-15.3
Developed: 04/13/10	Reviewed/Revised:	Effective Date: 05/10/10

### **SPECIMEN (REQUIREMENTS):**

To obtain adequate specimen, follow the instructions in this section closely.

- 1. Open the Cepheid Collection Device by peeling back the outer packaging.
- 2. Ask the patient to tilt his/her head back. Insert dry swabs approximately 1-2 cm into each nostril.
- 3. Rotate the swabs against the inside of the nostril for 3 seconds. Apply slight pressure with a finger on the outside of the nose to help assure good contact between the swab and the inside of the nose.
- 4. <u>Using the same swabs</u>, repeat for the second nostril, trying not to touch anything but the inside of the nose.
- 5. Remove the plastic transport tube. Twist off the tube cap and discard it. Place the swabs into the plastic transport tube. The swabs should go all the way into the tube until they rest on top of the sponge at the bottom of the tube. Make sure the red cap is on tightly. Note: the swabs should stay attached to the red cap at all times.
- 6. Label the plastic transport tube with patient ID and send to the laboratory.

Store swab specimen at room temperature (15-30°C) if it will be processed within 24 hours, otherwise store swab at 2-8°C. The swab specimen is stable up to 5 days when stored at 2-8°C.

# **SAFETY PRECAUTIONS (IF NEEDED):**

Treat all biological specimens, including used cartridges, as if capable of transmitting infectious agents. Because it is often impossible to know which might be infectious, all biological specimens should be treated with universal precautions. Guideline's for specimen handling are available from the U.S. Centers for Disease Control and Prevention and the Clinical and Laboratory Standards Institute (formerly National Committee for Clinical Laboratory Standards). Follow the hospital and laboratory safety procedures for working with chemicals and handling biological samples. Dispose of used Xpert MRSA cartridges according to your institution's safety guidelines for hazardous material.

## **EQUIPMENT/REAGENTS/SUPPLIES:**

The Xpert MRSA(GXMRSA-100N-10) contains sufficient reagents to process 10 specimens or quality control samples. The kit contains the following:

Xpert MRSA Assay Cartridges with integrated reaction tubes Bead 1 (freeze-dried) 1 per cartridge

Dalumaraga

1		Procedure Name: MRSA by PCR	
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Reagent 1 (Sodium Hydroxide)

Reagent 2 (Tris Buffer, EDTA and surfactants)

Xpert MRSA reagent pouches

Elution Reagent (Guanidinium thiocyanate and surfactants)

# Storage and Handling

- Store the Xpert MRSA cartridges and reagents at 2–28°C.
- Do not use reagents or cartridges that have passed the expiration date.
- Do not open a cartridge until you are ready to perform testing.
- Use the cartridge and reagents within 30 minutes after opening the package.
- Do not use any reagents that have become cloudy or discolored.

## Materials Required but Not Provided

- GeneXpert® Dx System: GeneXpert® instrument, computer, barcode wand reader and Manual
- Printer (See GeneXpert® Dx System Operator Manual for compatibility guidelines)
- Cepheid Sample Collection Device (part number 900-0370)
- Vortex mixer
- Disposable, sterile transfer pipettes
- Sterile gauze

#### Materials Available but Not Provided

KWIK-STIK<sup>TM</sup> from MicroBiologics catalog # 0158 MRSA as positive control and #0371 MSSE (methicillin sensitive Staphylococcus epidermis) as negative control.

# **CALIBRATION: NOT APPLICABLE**

#### **QUALITY CONTROL:**

Each test includes a Sample Processing Control (SPC) and probe check (PCC).

Sample processing control (SPC)—Ensures the sample was correctly processed. The SPC contains spores of *Bacillus globigii* in the form of a dry spore cake that is included in each cartridge to verify adequate processing of MRSA. The SPC verifies that lysis of MRSA has occurred if the organisms are present and verifies that specimen processing is adequate. Additionally this control detects specimenassociated inhibition of the real-time PCR assay. The SPC should be positive in a negative sample and can be negative or positive in a positive sample. The SPC passes if it meets the validated acceptance criteria.

Probe check control (PCC)—Before the start of the PCR reaction, the GeneXpert® Dx System measures the fluorescence signal from the probes to monitor bead rehydration, reaction-tube filling, probe integrity and dye stability. Probe Check passes if it meets the assigned acceptance criteria.

External controls—External controls are run every 24 hours.

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	Procedure Name: MRSA by PCR	
Section: Microbiology	Page 4 of 9	Procedure: MICRO-15.3
Developed: 04/13/10	Reviewed/Revised:	Effective Date: 05/10/10

#### PROCEDURE:

#### **Procedure Precautions:**

- Do not substitute Xpert MRSA reagents with other reagents.
- Do not open the Xpert MRSA cartridge lid except when adding sample and reagents.
- Do not use a cartridge that has been dropped or shaken after you have added the sample and reagents.
- Do not use a cartridge that has a damaged reaction tube.
- Each single-use Xpert MRSA cartridge is used to process one test. Do not reuse spent cartridges.
- Do not open a cartridge package until you are ready to perform testing.

#### Preparing the Cartridge

Important: Start the test within 15 minutes of adding the reagents to the cartridge.

Note: Use only one of the swabs. The second swab is required for repeat testing.

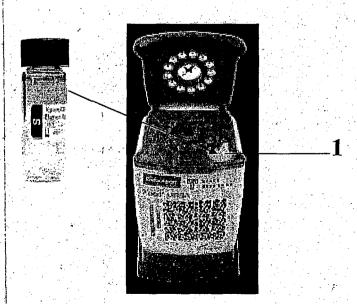
To add the sample and reagents into the cartridge (Xpert MRSA):

- 1. Remove the cartridge and reagents from the package.
- 2. Remove the swabs from the transport container and then remove one swab from the red cap.
- 3. Insert the swab into the tube containing the Elution Reagent (black cap).

Note: Use sterile gauze to minimize risks of contamination.

- 4. Hold the swab by the stem near the rim of the tube, lift the swab a few millimeters from the bottom of the tube and push the stem against the edge of the tube to break it. Make sure the swab is short enough to allow the cap to close tightly.
- 5. Close the lid and vortex at high speed for 10 seconds.
- 6. Open the cartridge lid. Using a sterile transfer pipette, transfer the entire contents of the Elution Reagent to the large notched opening (item #1 in Figure) in the GeneXpert cartridge.
- 7. Close the cartridge lid.

Figure 1. Xpert MRSA cartridge.



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	Procedure Name: MRSA by PCR	
Section: Microbiology	Page 5 of 9	Procedure: MICRO-15.3
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Starting the Test

Important: Before you start the test,

make sure the Xpert MRSA assay definition is imported into the software.

This section lists the basic steps of running the test. For detailed instructions, see the GeneXpert® Dx System Operator Manual.

- 1. Turn on the computer, and then turn on the GeneXpert® Dx instrument.
- 2. On the Windows® desktop, double-click the GeneXpert® Dx shortcut icon.
- 3. Log on to the GeneXpert Dx System software using your user name and password.
- 4. In the GeneXpert® Dx System window, click Create Test. The Scan Cartridge Barcode dialog box appears.
- 5. Scan the barcode on the Xpert MRSA cartridge. The Create Test window appears. Using the barcode information, the software automatically fills the boxes for the following fields: Select Assay, Reagent Lot ID, Cartridge SN, and Expiration Date.
- 6. In the **Sample ID** box, scan or type the sample ID. Make sure you type the correct sample ID. The sample ID is associated with the test results and is shown in the "**View Results**" window and all the reports.
- 7. Click **Start Test.** In the dialog box that appears, type your password.
- 8. Open the instrument module door with the blinking green light and load the cartridge.
- 9. Close the door. The test starts and the green light stops blinking. When the test is finished, the light turns off.
- 10. Wait until the system releases the door lock before opening the module door and removing the cartridge.
- 11. The used cartridges should be disposed in the appropriate specimen waste containers according to your institution's standard practices.

# **CALCULATIONS (IF REQUIRED):**

The results are interpolated by the GeneXpert<sup>®</sup> Dx System from measured fluorescent signals and embedded calculation algorithms and will be shown in the "View Results" window. For detailed instructions on how to view and print the results, see the GeneXpert Dx System Operator Manu.

# INTERPRETATION AND REPORTING RESULTS:

Possible results are:

#### **MRSA POSITIVE**

MRSA target DNA is detected (presumptive positive for MRSA colonization)

- MRSA POSITIVE— the MRSA target has a Ct within the valid range and endpoint above the minimum setting.
- SPC—NA (not applicable); SPC is ignored since MRSA amplification may compete with this control.
- Probe Check—PASS; all probe check results pass.

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	Procedure Name: MRSA by PCR	
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#### **MRSA NEGATIVE**

MRSA target DNA is not detected (presumed not colonized with MRSA), SPC meets acceptance criteria.

- MRSA NEGATIVE- MRSA target DNA is not detected.
- SPC—PASS; SPC has a Ct within the valid range and endpoint above the endpoint minimum setting.
- Probe Check—PASS; all probe check results pass.

#### INVALID

Presence or absence of MRSA cannot be determined, repeat test with extra swab. SPC does not meet acceptance criteria, the sample was not properly processed, or PCR is inhibited.

- MRSA INVALID- Presence or absence of MRSA DNA cannot be determined.
- SPC—FAIL; MRSA target result is negative and the SPC Ct is not within valid range and endpoint below minimum setting.
- Probe Check—PASS; all probe check results pass.

# **ERROR**

Presence or absence of MRSA cannot be determined, repeat test with extra swab. The Probe Check control failed probably due to reaction tube was filled improperly, a probe integrity problem was detected or because the maximum pressure limits were exceeded.

- MRSA—NO RESULT
- SPC—NO RESULT
- Probe Check—FAIL\*; all or one of the probe check results fail
- \*If the probe check passed, the error is caused by a system component failure.

### NO RESULT

Presence or absence of MRSA cannot be determined, repeat test with extra swab. Insufficient data were collected to produce a test result (for example, the operator stopped a test that was in progress).

- MRSA—NO RESULT
- SPC—NO RESULT
- . Prohe Check\_NA (not annicable)

1		***	
		Procedure Name: MRSA by PCR	
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• A NO RESULT indicates that insufficient data were collected. For example, the operator stopped a test that was in progress.

#### NORMAL AND PANIC VALUES:

The number and percentage of positive and negative cases relative to the reference culture method are calculated and presented in the table below.

Table 1 Expected Values for MRSA in Different Study Populations

Group	Positive n (%)	Negative n (%)	Total <sup>1</sup> (%)
Nursing homes, long term and extended stay facilities	62 (25.5)	181 (74.5)	243 (22.6)
Hospitalized >3 days	61 (23.0)	204 (77.0)	265 (24.7)
Hospitalized ≤3 days	29 (13.1)	193 (86.9)	222 (20.7)
Out patient clinic	46 (17.7)	214 (82.3)	260 (24.2)
Staff and others	11 (12.9)	74 (87.1)	85 (7.9)
Total	209 (19.4)	<sup>3</sup> 866 (80.6)	1075

All positive MRSA results on inpatients and Home Health are considered to be "Critical Results."

#### LIMITATIONS:

- The performance of the Xpert MRSA Assay was validated using the procedures provided in this package insert only. Modifications to these procedures may alter the performance of the test. Results from the Xpert MRSA Assay should be interpreted in conjunction with other laboratory and clinical data available to the clinician.
- Erroneous test results might occur from improper specimen collection, not following the recommended sample collection procedure, handling or storage, technical error, sample mix-up, or because the number of organisms in the specimen is not detected by the test. Careful compliance to the instructions in this insert is necessary to avoid erroneous results.
- Because the detection of MRSA is dependent on the number of organisms present in the sample, reliable results are dependent on proper specimen collection, handling, and storage.
- Recollection and Rerunning the Xpert MRSA when results are INVALID, ERROR, and NO RESULT may be required. Alternate procedures are available. For culturing, remaining swab specimens should be placed in appropriate transport systems and cultured within 4 days.
- A positive test result does not necessarily indicate the presence of viable organism. It is however, presumptive for the presence of MRSA.
- Testing with Xpert MRSA assay is used as an adjunct to other methods available.

	Procedure Name: MRSA by PCR	
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- Results may be affected by concurrent antibiotic therapy. Therefore, therapeutic success or failure cannot be assessed using this test because DNA might persist following antimicrobial therapy.
- Mutations or polymorphisms in primer or probe binding regions may affect detection of new or unknown MRSA variants resulting in a false negative result.
- The Xpert MRSA Assay does not provide susceptibility results. Additional time is required to culture and perform susceptibility testing

# **Interfering substances**

Potentially interfering substances evaluated include blood, mucus and nasal sprays used to relieve decongestion, nasal dryness or irritation. The presence of these substances did not significantly inhibit PCR and did not give invalid or erroneous results.

Table 2A Xpert MRSA Compared to Reference Culture Method

		Culti	ıre			
		+	•			
	+ [	182	44	226	Positive Agreement:	86.3%
Xpert MRSA		29	819	848	Negative Agreement:	94.9%
	•	211	863	1074*	PPV <sup>1:</sup>	80.5%
					NPV <sup>2:</sup>	96.6%

<sup>&</sup>lt;sup>1</sup>Positive predictive value

Table 2B Xpert MRSA Compared to Direct Culture Method

	Xpert	MRSA	vs. Dire	ect culture	
	Dire	ct Cult	ure		
1 1 1 1	+	- ,			
+	165	61	226	Positive Agreement:	94.3%
Xpert MRSA -	10	838	848	Negative Agreement:	93.2%
1	175	899	1074	PPV <sup>1:</sup>	73.0%
				NDV <sup>2:</sup>	ዕጸ ጸ%

<sup>&</sup>lt;sup>2</sup>Negative predictive value

	Procedure Name: MRSA by PCR	
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DETERDIBAÇÕES.		

**REFERENCES:** 

Cepheid Innovation, Xpert MRSA Package Insert 300-5188, Rev. A, December 2008.

**APPROVED:** 

Tom Thiele, Microbiology Shift Supervisor

Connie Wilkins, Laboratory Director

Susan O Pintado, Medical Director

Date: 4/14/10

Date: 4-16-16

Date: 4 (16/10

7/12/10

Prepared by Steven Crown

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# **Material Safety Data Sheet**

Product Name	Buffered Neutral Formalin 10%	Product Code	VW3239	
Manufacturer	EMD Chemicals Inc.	Effective Date	10/14/2005	<del>`</del>
	P.O. Box 70 480 Democrat Road	Print Date	12/8/2005	
	Gibbstown, NJ 08027 Prior to January 1, 2003 EMD Chemicals Inc. was EM Industries, Inc. or EM Science, Division of EM Industries,			
	Inc.			

For More Information Call

856-423-6300 Technical Service Monday-Friday: 8:00 AM - 5:00 PM In Case of Emergency Call

800-424-9300 CHEMTREC (USA) 613-996-6666 CANUTEC (Canada) 24 Hours/Day: 7 Days/Week

None. Synonym Laboratory Reagent

Material Uses

**Chemical Family** Mixture.

Component	(*			CAS#	% by Weight
Formaldehyde.	1		 	50-00-0	3.7
Methanol	ı			67-56-1	1.5
Sodium Phospha	te, Dibasic		k.	7558-79-4	<0.7
	en Phosphate,Monol	nydrate		10049-21-5	<0.5
Water		•		7732-18-5	>94

Physical State and Appearance	Liquid.
Emergency Overview	WARNING !
	HARMFUL IF SWALLOWED.
*.	CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
	CANCER HAZARD
	CONTAINS MATERIAL WHICH CAN CAUSE CANCER
	CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: MUCOUS
	MEMBRANES, GASTROINTESTINAL TRACT, RESPIRATORY TRACT, SKIN, CENTRAL
	NERVOUS SYSTEM, EYE, LENS OR CORNEA.
:	WADNING. This product contains a chamically brown to the Otate of Colifernia to
	WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

#### Potential Acute Health Effects

Eyes Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching.

Skin Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Non-permeator by skin.

Inhalation Hazardous in case of inhalation (lung irritant). Non-hazardous in case of inhalation.

Ingestion Hazardous in case of ingestion. Do not take internally.

#### **Potential Chronic Health Effects**

Section 4. First Aid Measures

Carcinogenic Effects Classified + (Proven.) by OSHA [Formaldehyde.]. Classified A2 (Suspected for human.) by · ACGIH, 2A (Probable for human.) by IARC [Formaldehyde.].

Additional information See Toxicological Information (section 11)

**Medical Conditions** Aggravated by Overexposure:

**Eye Contact** 

Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Check for and remove any contact lenses. In case of contact, immediately flush eyes with

Eye Contact	plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Ingestion	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
+ Section 5. Fire Fig	ghting Measures
Flammability of the Product	Non-flammable.
Auto-ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
<b>Products of Combustion</b>	Not applicable.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various	Risks of explosion of the product in presence of static discharge: Slightly explosive in presence of open flames, sparks and static discharge.
Substances	Risks of explosion of the product in presence of mechanical impact: Slightly explosive in presence of shocks.
Fire Fighting Media and Instructions	Not applicable.
Protective Clothing (Fire	Not applicable.
Special Remarks on Fire	Development of hazardous combustion gases or vapors possible in the event of fire.

Special Remarks on

Not available.

**Explosion Hazards** 

#### ∟ Section 6. Accidental Release Measures

Small Spill and Leak

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill and Leak

Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Spill Kit Information

The following EMD Chemicals Inc. SpillSolv (TM) absorbent is recommended for this product: SX1340 Formaldehyde Treatment Kit

### Section 7. Handling and Storage

Handling

Avoid prolonged contact with eyes, skin, and clothing. Avoid contact with eyes. Do not ingest. Avoid breathing vapors or spray mists. Avoid prolonged or repeated contact with skin. Use only with adequate ventilation. Wash thoroughly after handling.

Storage

Keep container tightly closed. Keep container in a cool, well-ventilated area.

# Section 8. Exposure Controls/Personal Protection

**Engineering Controls** 

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.

#### Personal Protection

Eyes Splash goggles.

Body Lab coat.

Respiratory Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Hands Gloves.

Feet Not applicable.

### Protective Clothing (Pictograms)





#### Personal Protection in Case of a Large Spill

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

#### Product Name

#### **Exposure Limits**

Formaldehyde.

EH40-MEL (United Kingdom (UK), 1997).

STEL: 2.5 mg/m3 15 minute(s).

STEL: 2 ppm 15 minute(s).

TWA: 2.5 mg/m<sup>3</sup> 8 hour(s).

TWA: 2 ppm 8 hour(s).

ACGIH (United States, 2000).

CEIL: 0.37 mg/m<sup>3</sup>

CEIL: 0.3 ppm

NIOSH REL (United States, 1994).

CEIL: 0.1 ppm 15 minute(s).

TWA: 0.01 ppm 10 hour(s).

OSHA Final Rule (United States, 1989).

STEL: 2 ppm 15 minute(s).

TWA: 0.75 ppm 8 hour(s).

Methanol

OSHA Transitional Rule (United States, 1993).

STEL: 2 ppm 15 minute(s). TWA: 0.75 ppm 8 hour(s).

ACGIH (United States, 1994). Skin

TWA: 262 mg/m<sup>3</sup> STEL: 328 mg/m<sup>3</sup>

OSHA (United States, 1989). Skin

TWA: 260 mg/m<sup>3</sup> STEL: 325 mg/m<sup>3</sup>

ACGIH (United States, 1994). Skin

STEL: 328 mg/m<sup>3</sup> 15 minute(s). STEL: 250 ppm 15 minute(s). TWA: 262 mg/m<sup>3</sup> 8 hour(s). TWA: 200 ppm 8 hour(s).

NIOSH REL (United States, 1994). Skin

STEL: 325 mg/m3 15 minute(s). STEL: 250 ppm 15 minute(s). TWA: 260 mg/m3 10 hour(s). TWA: 200 ppm 10 hour(s).

OSHA Final Rule (United States, 1989). Skin

STEL: 325 mg/m3 15 minute(s). STEL: 250 ppm 15 minute(s). TWA: 260 mg/m<sup>3</sup> 8 hour(s). TWA: 200 ppm 8 hour(s).

Sodium Phosphate, Dibasic Sodium Dihydrogen Phosphate, Monohydrate Water

Not available. Not available. Not available.

#### Section 9. Physical and Chemical Properties Odor Pungent. Color Clear. Colorless. Liquid. Physical State and Appearance Molecular Weight Not applicable. Molecular Formula Not applicable. 7 [Neutral.] pН Boiling/Condensation The lowest known value is 64.55°C (148.2°F) (Methanol). Weighted average: 99.27°C (210.7°F) Point May start to solidify at -0.1°C (31.8°F) based on data for. Water. Weighted average: -4.96°C Melting/Freezing Point (23.1°F) Specific Gravity Weighted average: 0.98 (Water = 1) Vapor Pressure The highest known value is 12.9 kPa (97 mmHg) (@ 20°C) (METHANOL). Vapor Density The highest known value is 1.11 (Air = 1) (METHANOL). Weighted average: 1.06 (Air = 1) Volatility 99.9% (V/V). (METHANOL.) The lowest known value is 0.05 ppm (Formaldehyde.) Weighted average: 28.88 ppm **Odor Threshold Evaporation Rate** 0.36 (Water) compared to (n-Butyl Acetate = 1) 5 (%) VOC Not available. LogKow

ATTACHMENT\_14 Page. Solubility

- Biodegradation

Soluble in water.

Stability and Reactivity	The product is stable.	 			·	
Conditions of Instability	Not available.					
Incompatibility with Various Substances	Highly reactive with ox Slightly reactive to rea		alkalis.			
Rem/Incompatibility	Not available.			- -		
Hazardous Decomposition	COx , Na2O			-		

Hazardous Polymerizatio	Will not occur.					
Section 11. Toxico	logical Information					
RTECS Number:	Formaldehyde Methanol Sodium Phosphate, Dibasic, Anhydrous Sodium dihydrogen phosphate monohydrate Water	LP8925000 PC1400000 WC4500000 Not available. ZC0110000				
Toxicity	Acute oral toxicity (LD50): 100 mg/kg [Rat]. (For Acute dermal toxicity (LD50): 15800 mg/kg [Rabb Acute toxicity of the vapor (LC50): 64000 ppm 4 h	it]. (Methanol).				
Chronic Effects on Humans	CARCINOGENIC EFFECTS: Classified + (Proven.) by OSHA [Formaldehyde.]. Classified A2 (Suspected for human.) by ACGIH, 2A (Probable for human.) by IARC [Formaldehyde.].					
Acute Effects on Humans	Acute Effects on Humans  Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by matering, and itching. Hazardous in case of skin contact (irritant). Skin inflamm characterized by itching, scaling, reddening, or, occasionally, blistering. Non-permetakin. Hazardous in case of inhalation (lung irritant). Non-hazardous in case of inhalation.					
Synergetic Products (Toxicologically)	Not available.					
Irritancy	<u>Draize Test</u> Not available.					
Sensitization	Not available.					
Carcinogenic Effects	Classified + (Proven.) by OSHA [Formaldehyde.]. Classified A2 (Suspected for human.) ACGIH, 2A (Probable for human.) by IARC [Formaldehyde.].					
Toxicity to Reproductive System	Not available.					
Teratogenic Effects	Not available.	-				
Mutagenic Effects	Not available.					
Section 12. Ecolog	ical Information					
Fastaviaite	Not available.					
Ecotoxicity	and the control of th	· · · · · · · · · · · · · · · · · · ·				

ATTACHMENT 14 Page 5 of 7

# Section 13. Disposal Considerations

**EPA** Waste Number

U122 U154

Treatment

Incineration, fuels blending or recycle. Contact your local permitted waste disposal site (TSD) for permissible treatment sites. ALWAYS CONTACT PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL

REGULATIONS.

### Section 14. Transport Information

**DOT** Classification

Not available.

**TDG** Classification

Not available.

IMO/IMDG

Not available.

Classification

Not available.

ICAO/IATA
Classification

# + Section 15. Regulatory Information

U.S. Federal Regulations

TSCA 8(b) inventory: Formaldehyde.; Methanol; Sodium Phosphate, Dibasic; Sodium

Dihydrogen Phosphate, Monohydrate; Water

SARA 302/304/311/312 extremely hazardous substances: Formaldehyde.

SARA 302/304 emergency planning and notification: Formaldehyde.

SARA 302/304/311/312 hazardous chemicals: Formaldehyde.; Methanol; Sodium Phosphate,

Dibasic

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Formaldehyde.:

Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard; Methanol: Fire

Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard; Sodium

Phosphate, Dibasic: Immediate (Acute) Health Hazard

SARA 313 toxic chemical notification and release reporting: Formaldehyde. 3.7%; Methanol

1.5%

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: Formaldehyde.; Sodium Phosphate, Dibasic

Clean air act (CAA) 112 accidental release prevention; Formaldehyde.

Clean air act (CAA) 112 regulated flammable substances: No products were found.

Clean air act (CAA) 112 regulated toxic substances: Formaldehyde.

WHMIS (Canada)

Class D-2A: Material causing other toxic effects (VERY TOXIC).

CEPA DSL: Formaldehyde.; Methanol; Sodium Phosphate, Dibasic; Water

This product has been classifed in accordance with the hazard criteria of the Controlled Product

Regulations and the MSDS contains all required information.

International Regulations

EINECS

Formaldehyde.

200-001-8

Methanol

200-659-6

Sodium Phosphate, Dibasic

231-448-7

Sodium Dihydrogen Phosphate, Monohydrate

231-449-2

Water

231-791-2

DSCL (EEC)

R22- Harmful if swallowed.

R36/38-Irritating to eyes and skin.

International Lists Australia (NICNAS): Formaldehyde.; Methanol; Sodium Phosphate, Dibasic; Sodium Dihydrogen Phosphate, Monohydrate; Water

Japan (MITI): Formaldehyde.; Methanol; Sodium Phosphate, Dibasic; Water

Japan (MOL): Formaldehyde.

Korea (TCCL): Formaldehyde.; Methanol; Sodium Phosphate, Dibasic; Water

Philippines (RA6969): Formaldehyde.; Methanol; Sodium Phosphate, Dibasic; Water China: No products were found.

#### State Regulations

Pennsylvania RTK: Formaldehyde.: (special hazard, environmental hazard, generic environmental hazard); Methanol: (environmental hazard, generic environmental hazard); Sodium Phosphate, Dibasic: (environmental hazard, generic environmental hazard) Massachusetts RTK: Formaldehyde.: Methanol: Sodium Phosphate. Dibasic New Jersey: Buffered Neutral Formalin 10%

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Formaldehyde.

California prop. 65 (no significant risk level): Formaldehyde.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Formaldehyde.

#### Section 16. Other Information

**National Fire** Protection Association (U.S.A.)



Fire Hazard

Reactivity

Specific Hazard

**Changed Since Last** Revision

#### Notice to Reader

The statements contained herein are based upon technical data that EMD Chemicals Inc. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. EMD CHEMICALS INC. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS,

Buffered Neutral Formalin 10%

VW3239

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Continued on Next Page

MATERIAL SAFETY DATA SHEET 3MTM 1228 Indicator Tape 02/28/11





# **Material Safety Data Sheet**

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This material safety data sheet (MSDS) is provided as a courtesy in response to a customer request. This product is not regulated under, and a MSDS is not required for this product by the OSHA Hazard Communication Standard (29 CFR 1910-1200) because, when used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, use or processing of the product not in accordance with the product's recommendations or not under ordinary conditions may affect the performance of the product and may present potential health and safety hazards.

# SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3MTM 1228 Indicator Tape

MANUFACTURER: 3M

**DIVISION:** Infection Prevention Division

ADDRESS: 3M Center

St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 02/28/11 Supercedes Date: 06/10/10

Document Group: 18-4831-6

Product Use:

Intended Use: For use in Optreoz or vapor phase hydrogen peroxude (VHP) sterilization processes.

# skehondangredienes

Ingredient	TETT LIS DEL VICTOR MO			G.A.S. No.	% by Wt
Polyester film backing		<del></del>		None	55 - 65
Styrene-butadiene polym	er		Naziona la ratra naziona da	9003-55-8	10 - 20
Palwiemene regin				3-1393-98-3	

#### STECCHECONEXALIAVAARDSAEDENHALIECAAUCON

#### 3.1 EMERGENCY OVERVIEW

Specific Physical Form: Roll of Tape

Odor, Color, Grade: White polyester tape with blue stripes.

General Physical Form: Solid

#### MATERIAL SAFETY DATA SHEET 3MTM 1228 Indicator Tape 02/28/11

Immediate health, physical, and environmental hazards: The environmental properties of this product present a low environmental hazard. This product, when used under reasonable conditions and in accordance with the 3M directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

#### 3.2 POTENTIAL HEALTH EFFECTS

#### **Eye Contact:**

No health effects are expected.

#### Skin Contact:

No health effects are expected.

#### Inhalation:

No health effects are expected.

#### Ingestion:

No health effects are expected.

#### 3.3 POTENTIAL ENVIRONMENTAL EFFECTS

This substance does not leach metals or other RCRA (Resource Conservation and Recovery Act) listed TCLP (Toxic Characteristic Leaching Procedure) hazardous substances at concentrations that would make the product a hazardous waste.

#### SECTION ASTRIBUTE ASTRIBUTE ASTRIBUTES.

#### 4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: No need for first aid is anticipated.

Skin Contact: --- No need for first aid is anticipated-

Inhalation: No-need for first aid is anticipated.

If Swallowed: No head for first aid is anticipated

# SECULONES HERBACCHUNGSVOXSORBS

### 5.1—FLAMMABLE-PROPERTIES

Autoignition temperature Flash Point Flammable Limits(LEL) Flammable Limits(UEL) No Data Available Not Applicable Not Applicable Not Applicable

#### 5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

#### 5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Not applicable. No unusual fire or explosion hazards are anticipated.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

# AS ECCHION 6 FACCIDENT WALREIGE AS ENTEASURIES

# **6.1.** Personal precautions, protective equipment and emergency procedures Not applicable.

#### 6.2. Environmental precautions

Not applicable. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Dispose of collected material as soon as possible.

#### Clean-up methods

Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill.

#### SECTION 7/4 HANDLING AND STORAGE

#### 7.1 HANDLING

This product is considered to be an article which does not release of otherwise result in exposure to a hazardous chemical under normal use conditions. Avoid contact with oxidizing agents. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

#### 7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct smillight. Not applicable. Store away from exidizing agents.

#### ASTECUTION READAROS URBECONTROLES PERSONATE PROTECTION

#### 8.1 ENGINEERING CONTROLS

Not applicable.

### 8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### 8.2.1 Eye/Face Protection

Page 3 of 7

#### MATERIAL SAFETY DATA SHEET 3MTM 1228 Indicator Tape 02/28/11

The following eye protection(s) are recommended: Safety Glasses with side shields

#### 8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your-glove and/or-protective clothing-manufacturer-for-selection-of-appropriate compatible materials.

Gloves made from the following material(s) are recommended: Nitrile Rubber

#### 8.2.3 Respiratory Protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

# 8.2.4 Prevention of Swallowing

Not applicable.

#### 8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	1	Limit	Additional Information
					AMOUNT INIVIAMENT
PETROLEUM DISTILLATES	OSHA	TWA		2000  mg/m3	
TRIKOPPONIDIGINALING	ODLIA	7 44 🗠			

# ESECTION 97 PHYSICAL AND CHEMICAL PROPERTIES

	•
Specific Physical Form:	Roll of Tape
Odor, Color, Grade:	White polyester tape with blue stripes.
General Physical Form:	Solid
Autoignition temperature	No Data Available
Flash Point	Not Applicable
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Boiling Point	Not Applicable
Density	Not Applicable
Vapor Density	Not Applicable
- Vapor Pressure	Not Applicable
	and the second s
Specific Gravity	Not-Applicable
	Not Applieable
Melting point	No Data Available
and the second	the way I have the thing the training of the control of the second of th
Solubility in Water	Nil. Terret Resident and the second s
Average particle size	Not Applicable
Evaporation rate	Not Applicable
Kow-Oct/Water partition coef	Not-Applicable
Percent volatile	Not Applicable
Viscosity	Not Applicable

#### STREETHYODY TO ESTEAD THE WAY AND THE ACTION OF THE

Stability: Stable.

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#### MATERIAL SAFETY DATA SHEET 3MTM 1228 Indicator Tape 02/28/11

Materials and Conditions to Avoid: 10.1 Conditions to avoid Heat

10.2 Materials to avoid Strong acids Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

#### Hazardous Decomposition or By-Products

Substance
Aldehydes
Carbon monoxide
Carbon dioxide

Condition
During Combustion
During Combustion
During Combustion

# ASECTION 115-110 XI (COLOGICALEIN FORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

# SECTION 12 ECOLOCICALINEORMATION

# ECOTOXICOLOGICAL INFORMATION

Not applicable:

# CHEMICAL FATE INFORMATION

Not applicable.

#### ESIECOTE (O) MÉRET DI ISPROSAVERCIONIS I DI ERRAVEI (O) NIS

Waste Disposal Method: Reclaim if feasible. If product can't be reclaimed, dispose of waste product in a sanitary landfill.

Alternatively, incinerate the waste product in an industrial, commercial; or municipal incinerator. Dispose of waste product in a sanitary landfill. As a disposal alternative, incinerate in an industrial or commercial facility.

Since regulations vary, consult applicable regulations or authorities before disposal.

#### ESIDOTHONME AFTER ANNS PORTE INFORMATE (ON

MATERIAL SAFETY DATA SHEET	
	3M <sup>TM</sup> 1228 Indicator Tane 02/28/11

ID Number(s):

70-2007-1887-5, 70-2007-6395-4

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

# SECTION SERECULATION SINEORY IN FOR A SERVICE OF A SERVIC

#### US FEDERAL REGULATIONS

Contact-3M-for-more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - No Delayed Hazard - No

#### STATE REGULATIONS

Contact 3M for more information.

# **CHEMICAL INVENTORIES**

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

Contact 3M for more information.

#### HINMHIR NAME (ON A PRINCE OF MANY ON SE

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910, 1200.

#### SECULIONALGEOUBBERAINEORMATION

NFPA Hazard Classification

Health: 0 Flammability: 1 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are

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#### MATERIAL SAFETY DATA SHEET 3MTM 1228 Indicator Tape 02/28/11

presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section 1: Product name was modified.

Copyright was modified.

Section 5: Unusual fire and explosion hazard information was modified.

Section 7: Handling information was modified.

Section 7: Storage information was modified.

Section 14: Transportation legal text was modified.

Page Heading: Product name was modified.

Section-9: Boiling point-information-was modified.

Section 5: Flammable limits (UE) information was modified.

Section 5: Flammable limits (LEL) information was modified.

Section 9: Flammable limits (LEL) information was modified.

Section 9: Flammable limits (UEL) information was modified.

Section 6: 6.2. Environmental precautions heading was modified.

Section 6: 6.1. Personal precautions, protective equipment and emergency procedures heading was modified.

Section 8: Skin protection phrase was added.

Section 6: Environmental procedures information was added.

Section 6: Methods for cleaning up information was added.

Section 8: Eye/face protection phrase was deleted.

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3M MSDSs are available at www.3M.com

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Hydroga Peroxito

# **Material Safety Data Sheet**

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This material safety data sheet (MSDS) is provided as a courtesy in response to a customer request. This product is not regulated under, and a MSDS is not required for this product by the OSHA Hazard Communication Standard (29 CFR 1910.1200) because, when used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, use or processing of the product not in accordance with the product's recommendations or not under ordinary conditions may affect the performance of the product and may present potential health and safety hazards.

# SECTION 1: PRODUCT: AND COMPANY IDENTIFICATION:

PRODUCT NAME: \$1248 Gas Plazma Chemical Indicator Strip

MANUFACTURER: 3M

**DIVISION:** Infection Prevention Division

ADDRESS: 3M Center

St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 06/03/10

Supercedes Date: 06/03/10

Document Group: 17-8784-5

**Product Use:** 

Intended Use: Chemical indicator for the gas plazma sterilization process.

#### CARAGOLITOUNE 200 UNICE PARABURANTIES

Ingredient C.A.S. No. % by Wt

Eolystyrene him coaled with indicator strip and graphics

All other ingredients comprise the graphics and indicator ink systems.

#### ACO BEAD HEBRARD A STANDAR AND A STANDARD A STANDARD AND A STANDARD A STANDARD A STANDARD AND A STANDARD A STANDARD A STANDARD

#### 3.1 EMERGENCY OVERVIEW

Specific Physical Form: Polystyrene film with an ink strip printed on it.

Odor, Color, Grade: White strip with blue ink & no odor

General Physical Form: Solid

ATTACHMENT 16 Page 1 of 7

age 1 of 7

#### MATERIAL SAFETY DATA SHEET 1248 Gas Plazma Chemical Indicator Strip 06/03/10

Immediate health, physical, and environmental hazards:

The environmental properties of this product present a low environmental hazard. This product, when used under reasonable conditions and in accordance with the 3M directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

#### 3.2 POTENTIAL HEALTH EFFECTS

#### **Eye Contact:**

No health effects are expected.

#### Skin Contact:

No health effects are expected.

#### Inhalation:

No health effects are expected.

#### Ingestion:

No health effects are expected.

#### 3.3 POTENTIAL ENVIRONMENTAL EFFECTS

This substance does not leach metals or other RCRA (Resource Conservation and Recovery Act) listed TCLP (Toxic Characteristic Leaching Procedure) hazardous substances at concentrations that would make the product a hazardous waste.

#### SECTION 4 BIRST AND MEASURES

#### 4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eve Contact: No need for first aid is anticipated.

Skin-Compact. No need-for-first-aid-is-anticipated

Inhalation: No need for first aid is anticipated

If Swallowed: No need for first aid is anticipated.

#### ESTECCHO NESCHIRITATA (CHUNINGEMITAS) URUES

#### 5.1 FLAMMABLE PROPERTIES

Flash Point

Not Applicable

M	IATERIAL SAFETY DATA SHEET 1248 Gas Plazm	a Chemical I	Indicator Strip	06/03/10

#### 5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

#### 5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: No unusual fire or explosion hazards are anticipated.

## SECHON 6: ACCUDENTATER RELEASIEMEASURES

Accidental Release Measures:

Not applicable.

# SECHION A HANDLING AND STORAGE

#### 7.1 HANDLING

Avoid prolonged or repeated skin contact. This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

# 7.2 STORAGE

Store away from heat. Store in a dry location according to the package instructions.

# SECTION SASEXIOS URBÉCONTERO ES/HERSONA EPROTEKCE HON

#### 8.1 ENGINEERING CONTROLS

Not applicable.

#### 

#### 8.2.1 Eye/Face Protection

Notapplicable

#### 8.2.2 Skin Protection

Not applicable.

#### 8.2.3 Respiratory Protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

Page 3 01 7

MATERIAL SAFETY DATA SHEET 1248 Gas Plazma Chemical Indicator Strip 06/03/10

# 8.2.4 Prevention of Swallowing

Not applicable.

# 8.3 EXPOSURE GUIDELINES

None Established

# SECTION SERVICE GATE AND CHEMICALER CORER BEING

Specific Physical Form: Polystyrene film with an ink strip printed on it.

Odor, Color, Grade: White strip with blue ink & no odor

General Physical Form: Solid

Flash Point Not Applicable

Boiling point Not Applicable
Density Not Applicable

Specific Gravity Not Applicable

Evaporation rate

Not Applicable

Kow - Oct/Water partition coef

Viscosity

Not Applicable

Not Applicable

#### SBCHONAU STABIETEY AND REACHMIN TY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

None known

10.2 Materials to avoid

Mone guown

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition: Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of exidation, heating, or reaction with another material.

Page 4 of 7

Μ	ATERIAL	SAFETY DATA	SHEET 1248 Gas Plazma Chemical Indicator Strin	06/03/10

# SECTION: HE TOXICOLOGICAL EINFORMATION:

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

# STECTH CONTINUES EXCOLORGY CANDALINEOR MATHON

#### ECOTOXICOLOGICAL INFORMATION

Not applicable.

#### CHEMICAL FATE INFORMATION

Not applicable.

### SECHEONER DISPOSAVE CONSIDER AND ONS

Waste Disposal Method: Dispose of waste product in a sanitary landfill. As a disposal alternative, Incinerate in an industrial or commercial facility in the presence of a combustible material.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

#### ASTRICATE (O) NEI ZEATREANNSTROTRATEINTROTRAMEATH (O) N

ID Number(s): 70-2007-1888-3

delease contact the emergency anumbers distection the strict page of the MSDS for decan sportation distoration for district material."

#### BARBITER DAN GREEFFILD IN DESCRIPTION OF THE BEST OF THE PROPERTY OF THE SECTION 
#### US FEDERAL RECULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - No Delayed Hazard - No

STATE REGULATIONS

Page 5 of 7

		emical Indicator	
			06/03/10

Contact 3M for more information.

#### **CHEMICAL INVENTORIES**

This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA.

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

Contact 3M for more information.

#### INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### ASIECTEIONEIGEOTHEREINEORYMATTION

**Revision Changes:** 

Copyright was modified.

Section 8: Skin protection phrase was modified.

Section 9: Property description for optional properties was added.

Section 10.1 Conditions to avoid heading was added.

Section 10.2 Materials to avoid heading was added.

Section 6-15 hydronmental horoceclures in formation a was raided

Section a Only received control of the section of the section and section as the section of the

Section 10: Conditions to avoid physical property was added.

기선어비미) 4별4(프로리티라)다(프ee[라타]) 1선구름) 19(9) #16(31년(장토[6)(원(장토[6)(원(건e

Section 10: Materials and conditions to avoid physical property was deleted

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	MATERIAL SAFETY DATA SHEET 1248 Gas Plazma Chemical Indicator Strip 06/03/10
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	3M MSDSs are available at www.3M.com
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	사용하는 현실 시간 경기 등록 기업으로 되었다. 
٠.	트로는 사람들이 있는데 얼마 이번만 생활들이 어떻게 한다고 말을 하시겠다면 모르겠다면 하셨습니다. 그리고 있는데 모르게 모델을
	그 생 보고 하는 아이들은 그 수 있는데, 하는 현존, 회사 전상을, 회사되는 해면 2022년에, 교육되었다며, 회사 회사 등 전문 전문 등 모든 사람들이 없다.



# **Material Safety Data Sheet**

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This material safety data sheet (MSDS) is provided as a courtesy in response to a customer request. This product is not regulated under, and a MSDS is not required for this product by the OSHA Hazard Communication Standard (29 CFR 1910.1200) because, when used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, use or processing of the product not in accordance with the product's recommendations or not under ordinary conditions may affect the performance of the product and may present potential health and safety hazards.

#### SECTION MEDRODUCE AND COMPANY IDENTIFICATION

PRODUCT NAME: 3MTM ComplyTM (SteriGageTM) Chemical Integrator 1243.

MANUFACTURER: 3M

**DIVISION:** Infection Prevention Division

ADDRESS: 3M Center

St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

**Issue Date:** 01/06/11 **Supercedes Date:** 05/11/09

Document Group: 19-0529-8

Product Use:

Intended Use: To indicate conditions for steam sterilization.

# SECTION 27 INCREDIENTS

 Ingredient
 C.A.S.No.
 % by William

 Paper
 Unknown
 > 92

 Salicylamide
 65-45-2
 < 8</td>

#### 3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: White paper strip with blue ink.

General Physical Form: Solid

Immediate health, physical, and environmental hazards:

This product, when used under reasonable conditions and

#### MATERIAL SAFETY DATA SHEET 3M<sup>TM</sup> Comply<sup>TM</sup> (SteriGage<sup>TM</sup>) Chemical Integrator 1243 01/06/11

in accordance with the 3M directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

# 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:** 

No health effects are expected.

Skin Contact:

No health effects are expected

Inhalation:

No-health-effects-are expected.

Ingestion:

No health effects are expected

#### Carcinogenicity:

<u>Ingredient</u> Arsenic	<u>C.A.S. No.</u> 7440382	Class Description  Grp. 1: Carcinogenic to humans	Regulation International Agency for Research on Cancer
Arsenic	7440382	Cancer hazard	OSHA Carcinogens
ARSENIC COM	POUNDS S~AS~C	Grp. 1: Carcinogenic to	International Agency for Research on Cancer
ARSENIC COMI	POUNDS, S-AS-I	Known human carcinoger	n National Toxicology Program Carcinogens
ARSENIC COMI	POUNDS, S~AS~I	Cancer hazard	OSHA Carcinogens
Cadmium	7440439	Grp. 1: Carcinogenic to	International Agency for Research on Cancer
Cadmium Cadmium	7440439 7440439	Known human carcinoger	
CADMIUM COI	MPOUNDS S-CD-C	Grp. 1: Carcinogenic to	International Agency for Research on Cancer
CADMIUM CO	MROUNDS S-CD-C	Known human carcinoger	National Toxicology Program Carcinogens
CADMIUM CO	VROUNDS SECDEC	Cancer hazard	OSHA Carcinogens
Lead:	7439921 7439921	Grp. 2B: Possible human Anticipated human carcin	carc. International Agency-for Research on Cancer
LEAD GOMPOL	CONTRACTOR OF THE CONTRACTOR O	Anticipated human carcin	iogen National-Loxicology-Program-Carcinogens
	ALLINE (AIRBORNE SEQ677 RESPIRABLE SIZE)	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
	ALIENE (AIRSORNE SEO677 RESPIRABLE SIZE)	Known human careinoge	n National Toxicology Program Carcinogeus

#### ESIKCII (ONEXE DIRSENAUDIM EASIRES

#### 4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

ATTACHMENT 17 Page 2 of 8

#### MATERIAL SAFETY DATA SHEET 3MTM ComplyTM (SteriGageTM) Chemical Integrator 1243 01/06/11

Eye Contact: No need for first aid is anticipated.

Skin Contact: No need for first aid is anticipated.

Inhalation: No need for first aid is anticipated.

If Swallowed: No need for first aid is anticipated.

#### ESECTEIONESE BIRTERICHEDINGAVIEASURIES

### 5.1 FLAMMABLE PROPERTIES

Autoignition temperature

Flash Point

Flammable Limits(LEL)

Flammable Limits(UEL)

Not Applicable

Not Applicable

Not Applicable

# 5.2 EXTINGUISHING MEDIA

Ordinary combustible material. Use fire extinguishers with class A extinguishing agents (e.g., water, foam).

#### 5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Not applicable.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

#### SECTION CACCIDENTALER FERASEMEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Not applicable

6.2. Environmental precautions

Not applicable.

Clean-up methods

Not applicable.

#### E FOVES LONG PARTE DATE DE LO LA CONTROL DE LE CONTROL DE LA CONTROL DE

#### 7.1 HANDLING

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

#### 7.2 STORAGE

Not applicable.

# SECTIONS LEXPOSURE CONTROLS PURSONAL PROTECTION

# 8.1 ENGINEERING CONTROLS

Not applicable.

# 8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

# 8.2.1 Eye/Face Protection Not applicable.

# 8.2.2 Skin Protection

Not applicable.

# **8.2.3 Respiratory Protection** Not applicable.

# **8.2.4** Prevention of Swallowing Not applicable.

# 8.3 EXPOSURE GUIDELINES

	Name at the same	A sadda a saddas	Terre	T ::4	Additional Tutomation	
	Ingredient	Authority	<u>Type</u>	<u>Limit</u>	Additional Information	•.
	Arsenic	ACGIH	TWA, as As	0.01  mg/m3		
	- Arsenic	OSHA	TWA	<del></del>	-29 CFR 1910:1018	
	ARSENIC COMPOUNDS, INORGANIC	ACGIH	TWA, as As	0.01  mg/m		
	ARSENIC COMPOUNDS, INORGANIC	OSHA	TWA	$-0.01$ _mg/m3 $-$	_29_CFR_1910_1018	
	Cadmium	ACGIH	TWA, as Cd.	0.002 mg/m3		
			respirable			
er Carrier	Cadmium	ACGIH	TWA, as Cd	0.01 mg/m3	na and a transfer de de contrata de la contrata de La contrata de la co	A TO A STATE OF THE PARTY OF THE
	Cadmium	OSHA	TWA	0.005 mg/m3	29 CFR 1910.1027	
A State of	Cadmium	OSHA	TWA, as fume	0.1 mg/m3		
	Gadmium Gadmium	OSHA	TWA, as dust	0.2 mg/m3 =		
	Cadmium	OSHA	CEIL, as fume	0.3 mg/m3		The same of the same of the same of
وراز	- Cadmium	OSHA	CEIL, as dust	0.6 mg/m3	eral de la granda de la companya de La companya de la co	
		Acon	TWA: as Cu,	0.002 me/m3		
		Y AVAILAGE.	respirable	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	CADMIUM COMPOUNDS	ACGIH	TWA, as Cd	0.01 mg/m3		rajain in gar
-	- CADMUM COMPOUNDS-	-OSHA-	TANA TERMINA	0-005-mg/m3	-29 CFR-1910-1027	Alexander de la companya de la compa
<u></u>	- Chromiun	ACGIH	TWA; as Cr			
	— Chromium	OSHA	TWA-as-Cr	i mg/m3		
	Lead	ACGIH	TWA, as Pb	0.05 mg/m3	A Company of the Comp	الموام الأشامين وكسر
-	Lead	OSHA	TWA	0.05 mg/m3	29 CFR 1910.1025	2. 4. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.
	- Mercury	ACGIH	TWA as Hg	0.025-mg/m3	-Skin Notation*	
•	Mercury	OSHA	CEIL	0.1 mg/m3		

#### MATERIAL SAFETY DATA SHEET 3MTM ComplyTM (SteriGageTM) Chemical Integrator 1243 01/06/11

Odor, Color, Grade: White paper strip with blue ink.

General Physical Form: Solid

Autoignition temperature

Flash Point

Not Applicable
Flammable Limits(LEL)

Flammable Limits(UEL)

Boiling Point

Density

Not Applicable

Vapor Pressure Not Applicable

Specific Gravity

PH

Not Applicable

Melting point

Not Applicable

Solubility in Water Nil

Evaporation rate

No Data Available

Kow - Oct/Water partition coef

Viscosity

No Data Available

No Data Available

#### ESPOTIONE OF STEARING THEY AND PREAGING WAY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

None known

10.2 Materials to avoid

None known

Hazardous Polymerization: Hazardous polymerization will not occur.

#### Hazardous Decomposition or By-Products

Substance Condition
Carbon monoxide During Combustion
Carbon dioxide During Combustion

# SECTEONELE-ROXICOROCICALEINEORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

ATTACHMENT 17 Page 5 of

MATERIAL SAFETY DATA SHEET 3M™ Comply™ (SteriGage™) Chemical Integrator 1243 01/06/11

#### **ECOTOXICOLOGICAL INFORMATION**

Not applicable.

#### CHEMICAL FATE INFORMATION

Not applicable.

#### SECTIONER DISPOSATEONS IDERATIONS

Waste Disposal Method: Dispose of waste product in a sanitary landfill. As a disposal alternative, incinerate in an industrial or commercial facility.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

# SECHIONE ATHRANSPORTAIN FOR AVAILON

ID Number(s):

70-2007-0269-7, 70-2007-0270-5, 70-2007-0271-3

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

# STECHTONE SERVECTO CARTORAY ENDORMANTONE

# US FEDERAL REGULATIONS

Contact 3M for more information.

### 511/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - No Delayed Hazard - No

## STATE REGULATIONS

Contacts/Mator more information.

#### CALIFORNIA PROPOSITION 65

Ingredient	C.A.S. No.	Classification
ARSENIC COMPOUNDS, INORGANI	C S~AS~I	**Carcinogen
CADMIUM COMPOUNDS	S~CD~C	*Male reproductive toxin
CADMIUM COMPOUNDS	S~CD~C	**Carcinogen
CADMIUM COMPOUNDS	S~CD~C	*Developmental Toxin
Arsenic	7440382	**Carcinogen
Cadmium	7440439	*Male reproductive toxin

Page 6 of 8

#### MATERIAL SAFETY DATA SHEET 3MTM ComplyTM (SteriGageTM) Chemical Integrator 1243 01/06/11

Cadmium	7440439	**Carcinogen
Cadmium	7440439	*Developmental Toxin
Lead	7439921	*Female reproductive toxin
Lead	7439921	*Male reproductive toxin
Lead	7439921	**Carcinogen
Lead	7439921	*Developmental Toxin
Mercury	7439976	*Developmental Toxin
LEAD COMPOUNDS	S~PB~C	*Female reproductive toxin
LEAD COMPOUNDS	S~PB~C	*Male reproductive toxin
LEAD COMPOUNDS	S~PB~C	**Carcinogen
LEAD COMPOUNDS	S~PB~C	*Developmental Toxin
MERCURY COMPOUNDS	S~HG~C	*Developmental Toxin
—SILICA, CRYSTALLINE (AIRBORNE——	SEQ677	**Carcinogen
PARTICLES OF RESPIRABLE SIZE)		

<sup>\*</sup>WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm;

#### **CHEMICAL INVENTORIES**

This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA.

Contact 3M for more information.

#### INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### KARCARIONAKETONAHAMPARARIANAKARIONE

#### NEDEACHD ZO ZO COSTOCATION

Health: 0 Flammability: 1 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NTPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term; acute exposure to a material under conditions of fire; spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Copyright was modified.

Section 14: Transportation legal text was modified.

Section 9: Boiling point information was modified.

Section 5: Flammable limits (UE) information was modified.

ATTACHMENT 17 Page 7 of 8

<sup>\*\*</sup> WARNING: contains a chemical which can cause cancer.

Section 5: Flammable limits (LEL) information was modified.

Section 9: Flammable limits (LEL) information was modified.

Section 9: Flammable limits (UEL) information was modified.

Section 15: California proposition 65 reproductive harm warning was added.

Section 9: Property description for optional properties was added.

Section 8: Exposure guidelines ingredient information was added.

Section 3: Carcinogenicity table was added.

Section 3: Carcinogenicity heading was added.

Section 15: California proposition 65 ingredient information was added.

Section 15: California proposition 65 heading was added.

Section 15: California proposition 65 cancer warning was added.

Section 6: 6.2. Environmental precautions heading was added.

Section 6: 6.1. Personal precautions, protective equipment and emergency procedures heading was added.

Section 10.1 Conditions to avoid heading was added.

Section 10.2 Materials to avoid heading was added.

Section 6: Personal precautions information was added.

Section 6: Environmental procedures information was added.

Section 6: Methods for cleaning up information was added.

Section 10: Materials to avoid physical property was added.

Section 10: Conditions to avoid physical property was added.

Section 6: Clean-up methods heading was added.

Section 6: Release measures information was deleted.

Section 6: Release measures heading was deleted.

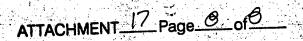
Section 10: Materials and conditions to avoid physical property was deleted.

Section 8: Exposure guidelines information - none - was deleted.

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3M MSDSs are available at www.3M.com



MATERIAL SAFETY DATA SHEET 3MTM ComplyTM Steam Indicator Tape (1201, 1222, 1223, 1255) 04/12/11





# **Material Safety Data Sheet**

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### SECTION ERRODUCTSAND COMPANY IDENTIFICATION

PRODUCT NAME: 3MIM Complying Steam House Land (1201, 1222, 1223, 1255)

**MANUFACTURER: 3M** 

**DIVISION:** Infection Prevention Division

ADDRESS: 3M Center, St. Paul, MN 55144-1000

# EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 04/12/11 Supercedes Date: 06/03/10

Document Group: 11-3029-3

Product Use:

Intended Use:

To hold packs and indicate conditions for steam sterilization.

# SECTION PAIN GREDIENTS

Ingredient	C.A.S. No.	% by Wt
Natural Rubber Saturant	None Trade Secret	20 - 26
Natural-Rubber Arthesive	None	20-24-
Actylate: Copolymer  Actylate: Copolymer	None	2-4
LEAD CARBONATE HYDROXIDE	1319-46-6	~ · · <= 0.7
	045174-5	S=0.5

# SECTION 2-154/ZARDSJIDENHIECAJI(ON:

#### STEEMER CHENCAMON DRAVIEW

Specific Physical Form: Roll of Tape

Odor, Color, Grade: Printed paper or tape, white, beige or blue.

General Physical Form: Solid

Immediate health, physical, and environmental hazards: This product contains dry Natural Rubber. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

### 3.2 POTENTIAL HEALTH EFFECTS

#### **Eve Contact:**

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

#### Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

#### Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

#### Ingestion:

Gastrointestinal-Irritation: Signs/symptoms-may-include-abdominal-pain; stomach-upset, nausea; vomiting-and-diarrhea.

May be absorbed following ingestion and cause target organ effects.

### **Target Organ Effects:**

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

NOTE: This product contains ethanol. There are data associating human consumption of alcoholic beverages (ethanol) with developmental toxicity. This is not an expected effect during the foreseeable use of this product.

#### Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

NOTE: This product contains ethanol. In IARC published Monograph No. 44, entitled, "Alcohol Drinking", the carcinogenicity of ethanol was determined based on chronic exposure to ethanol through human consumption of alcoholic beverages. This is not an expected effect during the foreseeable use of this product.

Ingredient ETHYL ALCOHOL	<u>C.A.S. No.</u> 64-17-5	Class Description  Grp. 1: Careinogenie to	Regulation International-Agency-for Research on Cancer
LEAD COMPOUNDS	S~PB~C	Anticipated human carcinogen	National Toxicology Program Carcinogens
LEAD, INORGANIC COMPOUNDS	S~PB~I	Grp. 2A: Probable human	International Agency for Research on Cancer

# 3.3 POTENTIAL ENVIRONMENTAL EFFECTS

The components labeled "Thorganic" do not biodegrade, but may be removed by other mechanisms. Tests show that the components labeled "Bioconcentrate" will bioconcentrate or accumulate in living organisms. \*\*Statements for Lead Carbonate Hydroxide (1319-46-6) are based on data for Lead (7439-92-1).

Lisorganic: Lead Carbonate Hydroxide (1319-46-6)

Bioconcentrate: Lead Carbonate Hydroxide (1319-46-6)

Lead is very toxic to aquatic organisms (0.1 mg/L < Lowest LC50, EC50, or IC50 < 1 mg/L).

# SECTION 45 HIRST AND MEASURES

### 4.1 FIRST AID PROCEDURES

Page 2 of 8

### MATERIAL SAFETY DATA SHEET 3MTM ComplyTM Steam Indicator Tape (1201, 1222, 1223, 1255) 04/12/11

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention. No need for first aid is anticipated.

Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention. No need for first aid is anticipated.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention. This product contains Lead and should be kept out of the reach of children. If ingested immediately consult a physician.

# 

### 5.1 FLAMMABLE PROPERTIES

Autoignition temperature

Flash Point

Flammable Limits(LEL)

Flammable Limits(UEL)

Not Applicable

Not Applicable

Not Applicable

# 5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide),

#### 5.3—PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual-Fire and Explosion Hazards:—No unusual-fire or explosion hazards are anticipated. See decomposition data in Section 10.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

### ASECTRONEG ACCIDIENTEA BARBELLA SIBMILA SURVES

6.1. Personal precautions, protective equipment and emergency procedures.

Evacuate unprofected and unitained personnel from the categories pills hould be eleaned up to you annued nersonne

6:2. Environmental precautions

Dispose of collected material as soon as possible.

Clean-up methods

Collect as much of the spilled material as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

#### STATEMENT OF THE STATEM

# MATERIAL SAFETY DATA SHEET 3M™ Comply™ Steam Indicator Tape (1201, 1222, 1223, 1255)

### 7.1 HANDLING

Avoid eye contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid skin contact with hot material. For industrial or professional use only. Do not ingest.

### 7.2 STORAGE

Not applicable.

# SECTION 8 EXPOSURE CONTROLS PERSONAL PROTECTION

# 8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust when product is heated

# 8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

# 8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields

### 8.2.2 Skin Protection

Avoid skin contact. Avoid skin contact with hot material. Wear appropriate gloves, such as Nomex, when handling this material to prevent thermal burns. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

### 8.2.3 Respiratory Protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

### 8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

### 8.3 EXPOSURE GUIDELINES

		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
	Ingredient		Authority	Tyne	Limit	Additional Information
	Semi-bleached craft paper		ACGUT	EWA.	Culyun Of	
	Semi-bleached craft paper		OSHA	TWA, respirable	5 mg/m3	and managements and physical and company and a second management of the company o
	Galatini alahan		OCETA	iraction	المحتوي والكاكري	Live in the second of the seco
-	Semi-bleached craft paper		OSHA:	TWA, as total dust	15 mg/m3	
			OSHA	TWA	1900-ppm	
		4.5	OOLIA	I-WAY.	–ra∧∧-m&mə—	

#### SOURCE OF EXPOSURE LIMIT DATA

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration
AHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

Specific Physical Form:

Roll of Tape

### MATERIAL SAFETY DATA SHEET 3MTM ComplyTM Steam Indicator Tape (1201, 1222, 1223, 1255) 04/12/11

Odor, Color, Grade: General Physical Form:

Autoignition temperature Flash Point Flammable Limits(LEL) Flammable Limits(UEL) Boiling Point

Density
Vapor Density

Vapor Pressure

Specific Gravity nH

Melting point Solubility In Water

Evaporation rate
Volatile Organic Compounds
Kow - Oct/Water partition coef
Percent volatile
VOC Less H2O & Exempt Solvents

Viscosity

Printed paper or tape, white, beige or blue.

Solid

No Data Available
Not Applicable
Not Applicable
Not Applicable
Not Applicable
No Data Available
Not Applicable
Not Applicable

Not Applicable

Not Applicable

Not Applicable

No Data Available Not Applicable

Not Applicable

Not Applicable Not Applicable Not Applicable No Data Available Not Applicable

# SECTIONA (DESTEABBLE DE VEANDER EA/GERVERY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

None known

10.2 Materials to avoid

None known

Hazardous Polymerization: Hazardous polymerization will not occur.

# Hazardous Decomposition or By-Products

Substance		Condition
Formaldehyde		At Elevated Temperatures—
<ul> <li>Carbon monoxide</li> </ul>		Oxidation, heat or reaction
Carbon-dioxide		Oxidation-heat-or-reaction—

Hazardous Decomposition: Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

Formaldehyde (CAS# 50:00-0). The 1222 tape contains a formaldehyde based resin. It is known that these resins may decompose under elevated temperatures and can potentially generate formaldehyde. While sampling inside a steam autoclave, indicated small amounts of formaldehyde could be generated during a sterilization cycle, no exposure to gaseous formaldehyde is expected at normal room temperature. At temperatures greater than 30° Celcius, estimated concentrations of formaldehyde in air during packing and offgassing were calculated to be below 0.1 ppm. Since workplaces can vary, an exposure assessment should be conducted if the need to confirm these results for a specific workplace is identified.

MATERIAL SAFETY DATA SHEET 3MTM ComplyTM Steam Indicator Tape (1201, 1222, 1223, 1255) 04/12/11

# ESTECTE ON THE TOXICOLOGICAL INFORMATIONS.

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

# ESTECTITO NEI 2/4 ECO EO CET CATE INTEORIMENTE O N

# ECOTOXICOLOGICAL INFORMATION

Not determined.

### CHEMICAL FATE INFORMATION

Not determined.

# ISECTION BEDISPOSATE CONSIDERATIONS

Waste Disposal Method: Dispose of waste product in a permitted hazardous waste facility.

Dispose of waste consisting of only pre- and/or post-sterilization tape material in a permitted hazardous waste facility.

Additional Information: Dispose as appropriate for your waste stream in accordance with local, state and federal regulations.

EPA Hazardous Waste Number (RCRA): D008 (Lead)

Since regulations vary, consult applicable regulations or authorities before disposal.

### ASTECCINION BLAST REVAINS ROPE OF THE TIME OF THE ASTE CONTROL OF THE STATE OF THE

ID Number(s):

44-0022-3071-0, 70-2004-6651-7, 70-2004-6652-5, 70-2004-6653-3, 70-2007-0997-3, 70-2007-2176-2, 70-2007-2177-0, 70-2007-2178-8, 70-2007-2179-6, CT-0606-0186-2, CT-0606-0187-0, CT-0606-0188-8, CT-0608-9017-7, CT-0608-9012-7, CT-0608-9013-5

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

#### ESTREET HINDING I SOUDANG HER EAVERGED AVERNER AUDI VIAVIER RETAIN

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Contact 3M for more information.

### 311/312 Hazard Categories:

Fire Hazard .. No ... Pressure Hazard - No ... Reactivity Hazard - No ... Immediate Hazard - Yes ... Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u> LEAD CARBONATE HYDROXIDE (LEAD

LEAD CARBONATE HYDROXIDE (LEAD COMPOUNDS)

LEAD CARBONATE HYDROXIDE (LEAD, INORGANIC COMPOUNDS)

C.A.S. No % by W

1319-46-6 <= 0.

ATTACHMENT 18 Page 6 of 9

Page 6 of 8

#### STATE REGULATIONS

Contact 3M for more information.

#### **CALIFORNIA PROPOSITION 65**

Ingredient	C.A.S. No.	Classification
LEAD COMPOUNDS	S~PB~C	*Female reproductive toxin
LEAD COMPOUNDS	S~PB~C	*Male reproductive toxin
LEAD-COMPOUNDS-	S~PB~C	**Carcinogen
LEAD COMPOUNDS	S~PB~C	*Developmental Toxin

<sup>\*</sup> WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.

#### CHEMICAL INVENTORIES

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

Contact 3M for more information.

Additional Information: Limits changed to comply with Canadian regulations.

### INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

# SECTE ONE 16 FOUR HERSINE OR WAY HONE SEE

NFPA Hazard Classification

Health: 1 Flammability: 1 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section-16: Disclaimer (second paragraph) was modified:

Section 5: Extinguishing media information was modified.

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Section 7: Handling information was modified.

Section 8: Prevention of swallowing information was modified.

Section 10: Hazardous decomposition or by-products table was modified.

Section 14: Transportation legal-text was modified.

Section 15: Inventories information was modified.

Section 9: Boiling point information was modified.

Section 5: Flammable limits (UE) information was modified.
Section 5: Flammable limits (LEL) information was modified.

Section 9: Flammable limits (LEL) information was modified.

Section 9: Flammable limits (UEL) information was modified.

Section 2: Ingredient table was modified.

Section 8: Exposure guidelines ingredient information was modified.

Section 3: Carcinogenicity table was modified.

<sup>\*\*</sup> WARNING: contains a chemical which can cause cancer.

### MATERIAL SAFETY DATA SHEET 3MTM ComplyTM Steam Indicator Tape (1201, 1222, 1223, 1255) 04/12/11

Section 15: California proposition 65 ingredient information was modified.

Section 6: Environmental procedures information was modified.

Section 10: Hazardous decomposition or by-products comment was added.

Section 10: Hazardous decomposition or by-products phrase was added.

Section 13: Waste disposal method information was added.

Section 10: Hazardous decompostion heading was added.

Section 12: Ecotoxicological phrase was added.

Section 12: Chemical Fate phrase was added.

Section 6: 6.2. Environmental precautions heading was added.

Section 6: 6.1. Personal precautions, protective equipment and emergency procedures heading was added.

Section-16: Web address was added.

Section 6: Personal precautions information was added.

Section 6: Methods for cleaning up information was added.

Section 8: Hand protection information was added.

Section 1: Address was added.

Copyright was added.

Company logo was added:

Section 6: Clean-up methods heading was added.

Telephone header was added.

Company Telephone was added.

Section 1: Emergency phone information was added.

Section 1: Emergency phone information was deleted.

Company Logo was deleted:

Copyright was deleted.

Section 16: Web address heading was deleted.

Section 6: Release measures heading was deleted.

Section 1: Address line 1 was deleted.

Section 1: Address line 2 was deleted.

Section 12: Ecotoxicological information comment was deleted.

Section 12: Chemical Fate information comment was deleted.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information in the MSDS available directly from 3M.

3M USA MSDSs are available at www.3M.com

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# SAFETY DATA SHEET

# 1. Identification of the Substance and Company

# Verify Chemical Indicator for SYSTEM 18 Sterile Processing Systems

Product No. LCC008 AND LCC009 **MSDS No. S202** 

NFPA 704 HAZARD RATING:

HEALTH: FIRE:

ND ND

Prepared by: M. Ebers....

REACTIVITY:

ND

asksteris\_msds@steris.com

Date Created: March 9, 2006 Date Revised: June 12, 2008 Date Reviewed; NA

STERIS Corporation, P.O. Box 147, St. Louis, Mo 63166, US

Emergency Telephone No. 1-314-535-1395 (STERIS); 1-800-424-9300 (CHEMTREC)

Telephone Number for information: 1-800-548-4873 (Customer Service - Healthcare Products)

Albert Browne Limited, Chancery House, 190 Waterside Road, Hamilton Industrial Park, Leicester, LE5 1QZ, UK

Product/Technical Information Phone No: 44 (0)116 276 8636

PRODUCT NAME:	PRODUCT NUMBER:
Verify SPI Chemical Indicator	LCC008
Verify SPI Chemical Indicator	LCC009
SHIPPING INFORMATION:	NOT RESTRICTED

These products are NOT hazardous products according to the OSHA Hazard Communication Standard, 29 CFR 1910,1200.

Verify Chemical Indicator for System 1® does not contain any components derived from animal origin, does not come into contact with materials of animal origin and therefore complies with the "Note for guidance of minimizing the risk of transmitting animal apongiform encephalopathy agents via human Veternary medicinal products (EMEA/410/01 Rev. 2-October 2003)."

Eree from lead and other heavy metals

In The Case Of Accidental Exposure, Take The Following Precautionary Measures:

EYES: Immediately flush eyes with plenty of water for 15 minutes. Get-medical attention if

SKIN: Immediately wash with soap and water. Get medical attention if irritation develops.

INGESTION: Give water to drink and get medical advice.

INHALATION: Remove to fresh air. Get medical attention for any breathing difficulty.

Chemical Monitoring Strips Handling And Disposal:

Handling and Storage Precautions: Keep cap tightly closed. Store at 6°C (43°F) to 30°C (86°F) and 30-60% relative humidity.

Waste Disposal Methods: Dispose of used/expired test strips and plastic bottles in trash receptacle in accordance with federal, state, and local regulations.

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er i er		MG	( )			



May 28, 2009

Dear Valued Customer:

I am writing in response to your questions about the lead and/or latex content of the 3M<sup>TM</sup> Comply<sup>TM</sup> 1222 Steam Indicator Tape and 3M<sup>TM</sup> Comply<sup>TM</sup> 1255 Steam Indicator Tape for Disposable Wraps.

3M<sup>™</sup> Comply<sup>™</sup> 1222 Steam Indicator Tape and 3M<sup>™</sup> Comply<sup>™</sup> 1255 Steam Indicator Tape for Disposable Wraps.

The Comply 1222 and 1255 steam indicator tapes contain both lead and latex. The lead is included as a component of the color development system that monitors process conformance to effective sterilization conditions. The latex comes from the rubber latex based adhesive used to reliably adhere and secure the sterilization packs.

Lead is recognized as a hazardous substance by the EPA. The Material Safety Data Sheet (MSDS) included outlines specific disposal considerations to address this condition.

**Section 13: Disposal Considerations** 

Waste Disposal Method: Dispose of waste consisting of only poststerilization tape material in a permitted hazardous waste facility.

Additional Information: Dispose as appropriate for your waste stream in accordance with local, state and federal regulations.

EPA Hazardous Waste Number (RCRA): D008 (Lead)

The Comply 1222 tape was tested [Toxic Chemical Leaching Protocol (TCLP)] as a singular waste stream using only post-sterilization tape samples as the solid waste. The data collected showed values above the EPA limit for lead, consistent with the D008 hazard classification. This designation, however, may not be representative of the actual hospital waste stream. If the tape is disposed of along with the packaging material, drapes and other paper products used in surgery, then the actual weight percent of lead is reduced and the waste may comply with the EPA standard and not be considered hazardous requiring special disposal.

Each facility must assess its own individual waste stream profile and develop appropriate disposal procedures consistent with local, state and federal regulations. The EPA regulation for hazardous waste disposal is described in 40 CFR 261.24. (This

3M Center St. Paul, MN 55144-1000 651 733 1110

regulation document is available on-line at www.EPA.gov if you don't have a published copy of it.)

The MSDS information and data does not reflect the hospital waste stream but only the individual product described. Since the TCLP value for the product only is above the EPA limit, the D008 hazard classification described in the MSDS is used. The TCLP value for the hospital waste stream may be different than that determined for the individual product.

This same information about the waste stream would apply to any 3M product that contains lead.

We hope this information if of help. Please contact us if you have future questions or needs. Thank you so much for using 3M products.

Sincerely,

Barbara C. Swenson

Regulatory Affairs

3M Infection Prevention Division

Barbara Livenion

3M Center, Bldg 275-05-W-06

St. Paul, MN 55144-1000

Tel: 651-736-1964; Fax: 651-737-5320

Email: bcswenson@mmm.com

Sandra Velte

Technical Service Representative

3M Infection Prevention Division

3M Center, Bldg 270-04-N-01

Sorda VILLO

St. Paul, MN 55144-1000

Tel: 651-575-0932, Fax: 651-736-7329

Email: svelte@mmm.com

← EPA1222.doc



May 28, 2009

Dear Valued Customer:

The management and control of waste derived from the use of disposal wraps secured with either 3M<sup>TM</sup> Comply<sup>TM</sup> 1222 Indicator Tape for Steam Sterilization or 1255 Steam Indicator Tape for Disposable Wraps, both containing lead, must meet EPA regulatory requirements for environmental exposure. Specifically, the disposal of such solid waste must comply with the Toxic Chemical Leaching Procedure (TCLP) limits. 3M has acquired limited data on the results of such testing that may be useful to you.

The data was generated using Kimberly-Clark (KC) KIMGUARD<sup>TM</sup> One-Step square wraps of several dimensions. The size and amount of tape used with each wrapper is listed below.

Wrapper S	Size	Amount of Tape	
24 X 24	(Cat. No. 62224)	2 pieces, 8 inches by ¾ inch	
36 X 36	(Cat. No. 62236)	2 pieces, 12 inches by ¾ inch	
45 X 45	(Cat. No. 62245)	2 pieces, 15 inches by ¾ inch	
54 X 54	(Cat. No. 62254)	2 pieces, 14 inches by ¾ inch	

The TCLP results ranged from a high of 4.7 mg/L (milligram/liter) to a low of 1.6 mg/L with most measurements in the nominal range of 2-3 mg/L. The EPA limit for hazardous declaration is anything above 5.0 mg/L for lead. Controls on the wrap-only showed no contribution from the wrap source. (The sample size was limited and while reliable and consistent with expectations, it was not large enough to be represented statistically.)

From these results, which are admittedly unique to the particular situation tested, we conclude that when the indicator tape is used in a standard steam sterilization process with disposable wraps and disposed collectively as a waste unit, the waste will comply with the EPA guideline and is not hazardous for lead. If this waste unit is, however, sorted for the indicator tape, that waste is hazardous as described in the MSDS.

If you have follow up questions on this information please contact me or your local 3M sales representative

Sincerely,

Barbara C. Swenson

Regulatory Affairs

3M Infection Prevention Division

Barbara Livenion

3M Center, Bldg 275-05-W-06

St. Paul, MN 55144-1000

Tel: 651-736-1964; Fax: 651-737-5320

Email: bcswenson@mmm.com

Sandra Velte

Technical Service Representative

3M Infection Prevention Division

3M Center, Bldg 270-04-N-01

Sorda VILLO

St. Paul, MN 55144-1000

Tel: 651-575-0932, Fax: 651-736-7329

Email: svelte@mmm.com

Date Revised: February 1, 2006

### Section I. Product Identification

Product Name: Barium Sulfate Powder

Manufacturer: E-Z-EM, Canada, on behalf of E-Z-EM, Inc., 1111 Marcus Avenue, Suite LL-26, Lake

Success, New York, 11042

Emergency/Information Contact: Adrianne Setton

Emergency/Information Telephone: (800)-544-4624 or (516) 333-8230, extension 3400

**Product Codes: 788** 

#### Section II. Components

Components	CAS No.	%(Optional)
Barium Sulfate (can contain silica - quartz )	7727-43-7 (14808-60-7)	99+% (0.1 - 1% of barium sulfate)

#### Section III. Physical Data

Boiling Point: N/A
Specific Gravity (H2O = 1): N/A
Vapor Pressure (mm Hg): N/A
Melting Point: Not tested
Vapor Density (Air = 1): N/A
Evaporation Rate (Butyl Acetate = 1): N/A
Solubility in Water: Insoluble

Appearance & Odor: White to off-white powder with no odor, slightly fruity or vanillin odor.

# Section IV. Fire and Explosion Hazard Data

Flash Point (method): N/A Flammable Limits: UEL - N/A LEL - N/A

Fire Extinguishing Media: Use extinguishing media that is suitable for surrounding fire.

Special Fire Fighting Procedures: Firefighters should wear full protective equipment and self- contained

breathing apparatus with full face piece.

Unusual Fire & Explosion Hazards: None known

Toxic Gases Emitted: Sulfur dioxide

### Section V. Reactivity Data

Stability: Stable

Conditions to avoid: None documented

Incompatible materials: Phosphorus, Aluminum

Decomposition products: Not tested
Hazardous Polymerization: Will not occur

#### Section VI. Health Hazard Data

Permissible Exposure Limit (PEL) for barium sulfate: Total Dust - 15 mg/m<sup>3</sup> Time Weighted Average (TWA), Respirable dust - 5 mg/m<sup>3</sup> TWA

Threshold Limit Value (TLV) for barium sulfate: Total Dust- 10 mg/m<sup>3</sup> TWA Silica - quartz, respirable dust - 0.1 mg/m<sup>3</sup> TWA

Short-Term Exposure Limit (STEL): Not established

Routes of Exposure: Inhalation, Ingestion

Health Hazards (acute and chronic): Through normal routes of entry, not expected to be a hazard. May cause irritation to eyes, skin and lungs. No adverse health effects expected from chronic exposure.

Carcinogenicity: Crystalline silica is listed by IARC as a Class 2A carcinogen based on limited evidence in humans and sufficient evidence in animals. Crystalline silica is also listed by the NTP as a substance

reasonably anticipated to be a carcinogen. NTP: Yes IARC: Yes OSHA: No

Effects of exposure: : May cause constipation. Eyes, skin and lungs may become irritated.

Medical conditions generally aggravated by exposure: No information found relating to normal routes of

Page: 002

Date Revised: February 1, 2006

#### Section I. Product Identification

Product Name: Barium Sulfate Powder

Manufacturer: E-Z-EM, Canada, on behalf of E-Z-EM, Inc., 1111 Marcus Avenue, Suite LL-26, Lake

Success, New York, 11042

Emergency/Information Contact: Adrianne Setton

Emergency/Information Telephone: (800)-544-4624 or (516) 333-8230, extension 3400

**Product Codes: 788** 

### Section II. Components

Components	CAS No.	%(Optional)
Barium Sulfate (can contain silica - quartz )	7727-43-7 (14808-60-7)	99+% (0.1 - 1% of barium sulfate)

#### Section III. Physical Data

Boiling Point: N/A Specific Gravity (H2O = 1): N/A Vapor Pressure (mm Hg): N/A Melting Point: Not tested Vapor Density (Air = 1): N/A

Evaporation Rate (Butyl Acetate = 1): N/A

Solubility in Water: Insoluble

Appearance & Odor: White to off-white powder with no odor, slightly fruity or vanillin odor.

# Section IV. Fire and Explosion Hazard Data

Flash Point (method): N/A

Flammable Limits: UEL - N/A LEL - N/A

Fire Extinguishing Media: Use extinguishing media that is suitable for surrounding fire.

Special Fire Fighting Procedures: Firefighters should wear full protective equipment and self- contained

breathing apparatus with full face piece.

Unusual Fire & Explosion Hazards: None known

Toxic Gases Emitted: Sulfur dioxide

### Section V. Reactivity Data

Stability: Stable

Conditions to avoid: None documented

Incompatible materials: Phosphorus, Aluminum

Decomposition products: Not tested Hazardous Polymerization: Will not occur

# Section VI. Health Hazard Data

Permissible Exposure Limit (PEL) for barium sulfate: Total Dust - 15 mg/m<sup>3</sup> Time Weighted Average (TWA), Respirable dust - 5 mg/m 3 TWA

Threshold Limit Value (TLV) for barium sulfate: Total Dust- 10 mg/m3 TWA Silica - quartz, respirable dust - 0.1 mg/m<sup>3</sup> TWA

Short-Term Exposure Limit (STEL): Not established

Routes of Exposure: Inhalation, Ingestion

Health Hazards (acute and chronic): Through normal routes of entry, not expected to be a hazard. May cause irritation to eyes, skin and lungs. No adverse health effects expected from chronic exposure. Carcinogenicity: Crystalline silica is listed by IARC as a Class 2A carcinogen based on limited evidence in

humans and sufficient evidence in animals. Crystalline silica is also listed by the NTP as a substance

reasonably anticipated to be a carcinogen. NTP: Yes IARC: Yes OSHA: No

Effects of exposure: : May cause constipation. Eyes, skin and lungs may become irritated.

Medical conditions generally aggravated by exposure: No information found relating to normal routes of

exposure.

### **Emergency and First Aid procedures:**

- Eye contact Flush with water for at least 15 minutes.
- Skin contact Wash area thoroughly with soap and water.
- If ingested and person is conscious Give several glasses of water to dilute. If irritation persists
  or large quantities are ingested, get medical attention.
- Inhalation remove to fresh air; get medial attention for any breathing difficulty. If irritation persists
  or large quantities are ingested, get medical attention.

# Section VII. Spill and Disposal Information

Steps to be taken in case material is released or spilled: Wear appropriate protective equipment; respirator, safety goggles and gloves. Sweep material up. Place materials in container and label properly.

Waste Disposal Procedures: Products are not listed hazardous wastes under RCRA. Products are not likely to qualify as characteristic hazardous wastes, but any final determination depends on the specific circumstances of product usage and handling. Disposal should take place in compliance with federal, state and local laws and regulations.

# Section VIII. Handling and Storage Precautions

- Store indoors in a tightly closed container, protected from extreme temperatures and potential sources of damage. Can be stored in any general chemical storage area.
- Do not smoke, eat or drink while handling any chemical. Practice good industrial and personal hygiene to avoid unnecessary exposure.

### Section IX. Protective Equipment

Respiratory Protection: If exposure limits are exceeded use a dust respirator.

Ventilation: Use adequate local exhaust ventilation to keep fume levels as low as possible.

Protective Gloves: Appropriate gloves
Eye Protection: Safety goggles or glasses

Emergency Equipment: Always ensure there is an emergency eye wash in the area.

# MATERIAL SAFETY DATA SHEET

#### **SECTION 1 - General Information** T2 Automatic X-Ray Developers, Working Solution PRODUCTUSE Photographic developer HMIS SCALE HEALTH FLAMMABILITY 0 REACTIVITY 0 · PPE CATALOG # White Mountain Imaging SUPPLIER 4010D, 4010D-ADM, 4010D-AG, 4010D-DP, 4010D-EX, 4010D-LA, 4010D-MR, 4010D-MV, 4010D-UM, 4200D, P.O. Box 216 Salisbury NH 03268 ADDRESS EMERGENCY TEL # CHEMTREC 800-424-9300 603-648-2124 PHONE NO. SECTION 2 - Product and Hazardous Ingredients Information **CAS NUMBER HAZARDOUS INGREDIENTS** W/W % Permissible Exposure Limit LD50 LC50 Water 7732-18-5 85-95 not listed not available 42.6 gm/kg 7681-57-4 Sodium metabisulfite 2000 mg/kg <3 NIOSH TWA 5 mg/m3 not available Hydroquinone 123-31-9 OSHA TWA 2 mg/m3 320 mg/kg not available <2 Potassium hydroxide 1310-58-3 <2 NIOSH (C) 2 mg/m3 365 mg/kg not available **SECTION 3 - Hazards Identification** EFFECTS OF ACUTE EXPOSURE TO PRODUCT Harmful if swallowed. May cause burning or irritation of eyes and mucous membranes. May cause mild skin irritation and or allergic reaction. Prolonged inhalation of vapors may be irritating and cause headaches. EFFECTS OF CHRONIC EXPOSURE TO PRODUCT None known **SECTION 4 - First Aid Measures** Wash exposed skin thoroughly with soap and water. If irritation persists seek medical advice. Flush eyes with water for 15 minutes. Seek medical advice if symptoms persist. DO NOT induce vomiting. Seek medical attention immediately. INHALATION If inhaled, remove to fresh air. **SECTION 5 - Fire Fighting Measures** FLAMMABILITY YES IF YES, UNDER WHAT CONDITIONS NO X MEANS OF EXTINCTION As needed to extinguish adjacent fire source. FLASHPOINT (°C) AND METHOD UPPER FLAMMABLE LIMIT (% BY VOLUME) LOWER FLAMMABLE LIMIT (% BY VOLUME) AUTO: GNITION TEMPERATURE (°C) Not appropriate Not appropriate Not appropriate Not appropriate HAZARDOUS COMBUSTION PRODUCTS EXPLOSION DATA SENSITIVITY TO IMPACT SENSITIVITY TO STATIC DISCHARGE See "Hazardous Decomposition Products". Not susceptible Not susceptible **SECTION 6 - Accidental Release** Flush to sewer with plenty of water, if permitted. If not, soak up with dry absorbent material. Consult with governmental regulatory agencies for appropriate disposal of this material. Wear splash goggles, impervious gloves and apron. **SECTION 7 - Handling and Storage** Read and follow the label, material safety data sheet, and instructions before using. Avoid any contact with skin and eyes. Keep container tightly closed. Avoid incompatible substances. Wash thoroughly after handling this product.

ATTACHMENT 22 Rage THOMAS STITA

# MATERIAL SAFETY DATA SHEET

# **SECTION 1 - General Information**

PRODUCT NAME T2 Automatic X-Ray Fixers Concentrate, Working Solution

PRODUCT USE	Photographic fixer	HMIS SCALE	HEALTH	1	FLAMMABILITY	0	REACTIVITY	0	PPE	С
SUPPLIER	White Mountain Imaging		CATALOG # 3303, 40	10F	, 4010FP, 43	00F				
ADDRESS	PO Box 216 Salisbury NH 0326				, ,					
PHONE NO.	603-648-2124 EMERGENCY TEL # (	CHEMTREC 800-424-9300							,	

SECTION 2 - Product and Hazardous Ingredients Information									
HAZARDOUS INGREDIENTS	CAS NUMBER	W/W %	Permissible Exposure Limit	LD50	LC50				
Water Ammonium thiosulfate Sodium sulfite Aluminum sulfate	7732-18-5 7783-18-8 7757-83-7 10043-01-3	90-95 8-12 <2 <2	not listed not listed not listed ACGIH TWA 2mg/m3	42.6 gm/kg 2890 mg/kg 2825 mg/kg 6201 mg/kg	not available not available not available not available				

# **SECTION 3 - Hazards Identification**

EFFECTS OF ACUTE EXPOSURE TO PRODUCT

Harmful if swallowed. may cause burning or irritation of eyes and mucous membranes. may cause mild skin irritation and /or allergic skin reaction. Prolonged inhalation of vapors may be irritating and may cause headaches.

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT None known

# **SECTION 4 - First Aid Measures**

SKIN CONTACT

Wash exposed skin thoroughly with soap and water. If irritation persists seek medical advice.

EYE CONTACT

Flush eyes with water for 15 minutes. Seek medical advice if symptoms persist.

INCESTION

DO NOT induce vomiting. Seek medical advice giving details of amount swallowed and toxicity.

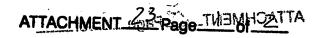
#### INHALATION If inhaled, remove to fresh air. **SECTION 5 - Fire Fighting Measures** FLAMMABILITY IF YES, UNDER WHAT CONDITIONS NO X MEANS OF EXTINCTION As needed to extinguish adjacent fire source. FLASHPOINT (°C) AND METHOD AUTOIGNITION TEMPERATURE (°C) UPPER FLAMMABLE LIMIT (% BY VOLUME) LOWER FLAMMABLE LIMIT (% BY VOLUME) Not appropriate Not appropriate Not appropriate Not appropriate HAZARDOUS COMBUSTION PRODUCTS EXPLOSION DATA SENSITIVITY TO IMPACT SENSITIVITY TO STATIC DISCHARGE See "Hazardous Decomposition Products". Not susceptible Not susceptible

# **SECTION 6 - Accidental Release**

Flush to sewer with plenty of water, if permitted. If not, soak up with dry absorbent material. Consult with governmental regulatory agencies for appropriate disposal of this material. Wear appropriate protective equipment.

# **SECTION 7 - Handling and Storage**

Read and follow the label, material safety data sheet, and instructions before using. Avoid any contact with skin and eyes. Keep container tightly closed. Avoid incompatible substances. Wash thoroughly after handling this product.



# **PHOTO LOG**

Facility Name/City: St. John's Regional Medical Center, 2727 McClelland Boulevard, Joplin, Missouri 64804

Facility ID #: MOD076262500

**Date:** May 4-5, 2011

Photographer: Michael J. Martin

Type of Camera: Canon Power Shot G5, Serial #: 6721003894

Digital Recording Media: Flashcard

All digital photos were copied by: Michael J. Martin on May 20, 2011.

All digital photos were copied to: CD-R

Original copy is stored in: CD-R Digital photos were downloaded to CD-R by Michael J. Martin.

No changes were made in the original image files prior to storage on the CD-R.

Report Photo#	Photographer	Date	Approx. Time	File Name (IMG_xxx.jpg)	Description
1	Michael J. Martin	05/04/2011	11:16 AM	0001	Photo of four plastic two by two foot containers of unopened/unused pharmaceuticals (slated for reverse distribution) located at the Pharmacy. Photo taken facing east.
2	Michael J. Martin	05/04/2011	11:17 AM	0002	Same image as Photo #1. Photo taken facing east.
3	Michael J. Martin	05/04/2011	11:19 AM	0003	Photo of one biohazardous waste storage container located at the Pharmacy (near the chemotherapy preparation hood filter). Photo taken facing south.
4	Michael J. Martin	05/04/2011	11:19 AM	0004	Same image as Photo #3. Photo taken facing south.
5	Michael J. Martin	05/04/2011	12:02 PM	0005	Photo of 28 one gallon hazardous waste storage containers of waste stain located at the Hazardous Waste Storage Area. Photo taken facing east.
6	Michael J. Martin	05/04/2011	12:02 PM	0006	Photo of one 1-gallon hazardous waste storage container of waste stain (not marked per the DOT requirements, not marked with the date of accumulation, and not marked with the words "Hazardous Waste") located at the Hazardous Waste Storage Area. Photo taken facing east.

7	Michael J. Martin	05/04/2011	12:53 PM	0007	Photo of one 1-gallon storage
<b>'</b>	Whichael J. Martin	03/04/2011	12.33 FW	0007	hazardous waste storage container of
					waste stain (marked per the DOT
					requirements, marked with the
					03/28/2011 date of accumulation, and
				*	marked with the words "Hazardous
			ļ		Waste") located at the Hazardous
					Waste Storage Area. Photo taken
				1	facing east.
8	Michael J. Martin	05/04/2011	1:28 PM	0008	Photo of 3M 1228 indicator tape (on
			·		the dispensing unit), 3M 1248
			* 1	,	chemical indicator strips, two 3M
			<b>j</b>	·-	Comply 1243 integrators, and one roll
j	·	•	,		of 3M Comply 1222 indicator tape
					located at Central Sterile. Photo
,					taken facing east.
9	Michael J. Martin	05/04/2011	1:36 PM	0009	Photo of Steris LCC008 indicator
					strips (bottom) and Steris 20
]					Concentrate (top) located at Central
4 3					Sterile. Photo taken facing east.
10	Michael J. Martin	05/04/2011	2:04 PM	0010	Photo of one 1-gallon hazardous
10	Wilchael J. Waltin	05/04/2011	2.041111	0010	waste satellite accumulation container
,					of waste stain located at the Histology
	·				1
11	Michael J. Martin	05/04/2011	2.26 DM	0011	Lab. Photo taken facing south.
1 11	Michael J. Martin	03/04/2011	2:36 PM	0011	Photo of Spectra MRSA waste (agar
	·				plates) and Xpert MRSA waste (blue
					cartridges) stored in the biohazardous
					waste storage container located at the
	-				Microbiology Lab. Photo taken
		0.7/0.1/0.011			facing north.
12	Michael J. Martin	05/04/2011	2:37 PM	0012	Same image as Photo #11. Photo
					taken facing north.
13	Michael J. Martin	05/04/2011	3:22 PM	0013	Photo of one silver recovery unit
				·	located at the Radiology Department
					(Dark Room). Photo taken facing
		<u> </u>		·	south.
14	Michael J. Martin	05/04/2011	3:24 PM	0014	Photo of two 55-gallon storage
					containers of medical film located at
					the Radiology Lab. Photo taken
					facing south.
15	Michael J. Martin	05/04/2011	3:36 PM	0015	Photo of 29 one gallon storage
				,	containers of waste formalin located
	. '.			. "	at the Shipping Dock. Photo taken
			; 	·	facing north.
16	Michael J. Martin	05/04/2011	3:36 PM	0016	Same image as Photo #15. Photo
					taken facing north.
·	<del></del>	-	<del></del>	· <del></del> -	<u> </u>

original or an experience of a

(本本など) 全に発音的には、後の下部機能は関係した関係的関係になったある。これをいかで

17	Michael J. Martin	05/04/2011	3:40 PM	0017	Photo of biohazardous waste storage containers located at the Shipping Dock. Photo taken facing north.
18	Michael J. Martin	05/05/2011	8:35 AM	0018	Photo of one agar plate (Spectra MRSA method) located at the Microbiology Lab. Photo taken facing north.
19	Michael J. Martin	05/05/2011	8:38 AM	0019	Photo of the hazardous waste label located on the biohazardous waste storage container (Spectra MRSA waste and Xpert MRSA waste) located at the Microbiology Lab. Photo taken facing north.
20	Michael J. Martin	05/05/2011	9:12 AM	0020	Photo of three open boxes of 114 universal waste-lamps located at the Universal Waste Storage Area (Electrical Closet). Photo taken facing south.
21	Michael J. Martin	05/05/2011	9:13 AM	0021	Same image as Photo #20. Photo taken facing north.
22	Michael J. Martin	05/05/2011	9:15 AM	0022	Photo of one open box of 33 universal waste-lamps located at the Universal Waste Storage Area (Electrical Closet). Photo taken facing south.
23	Michael J. Martin	05/05/2011	9:15 AM	0023	Photo of one open box of 30 universal waste-lamps located at the Universal Waste Storage Area (Electrical Closet). Photo taken facing south.
24	Michael J. Martin	05/05/2011	9:55 AM	0024	Photo of two soldering gun units (with sponges) located at the Biomedical Services Department. Photo taken facing west.
25	Michael J. Martin	05/05/2011	9:58 AM	0025	Photo of two rolls of lead solder located at the Biomedical Services Department. Photo taken facing west.
26	Michael J. Martin	05/05/2011	10:07 AM	0026	Photo of alkaline batteries located at the Biomedical Services Department. Photo taken facing west.
27	Michael J. Martin	05/05/2011	10:07 AM	0027	Photo of lead-acid batteries located at the Biomedical Services Department. Photo taken facing west.

3. A. A

St. John's Regional Medical Center
2727 McClelland Boulevard
Joplin, Missouri 64804
MOD076262500
RCRA CEI Photos

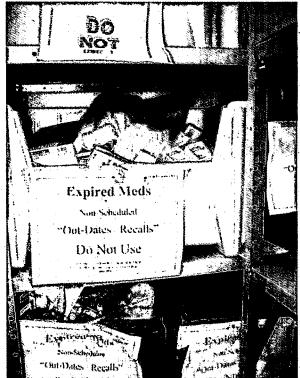
Photos taken by Michael J. Martin Mall Martin Martin Mall Martin Martin Mall Martin Mall Martin Marti



Photo of four plastic two by two foot containers of unopened/unused pharmaceuticals (slated for reverse distribution) located at the Pharmacy. Photo taken facing east.

Photo 1

Michael J. Martin



St. John's May 4, 2011

Same image as Photo #1. Photo taken facing east.

Photo 2

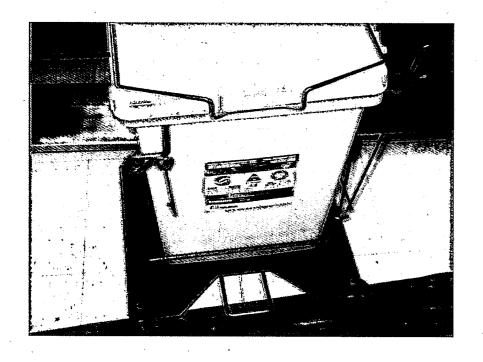


Photo of one biohazardous waste storage container located at the Pharmacy (near the chemotherapy preparation hood filter). Photo taken facing south.

Photo 3

Michael J. Martin W



St. John's May 4, 2011

Same image as Photo #3. Photo taken facing south.

Photo 4



Photo of 28 one gallon hazardous waste storage containers of waste stain located at the Hazardous Waste Storage Area. Photo taken facing east.

Photo 5

Michael J. Martin www.



St. John's May 4, 2011

Photo of one 1-gallon hazardous waste storage container of waste stain (not marked per the DOT requirements, not marked with the date of accumulation, and not marked with the words "Hazardous Waste") located at the Hazardous Waste Storage Area. Photo taken facing east.

Photo 6



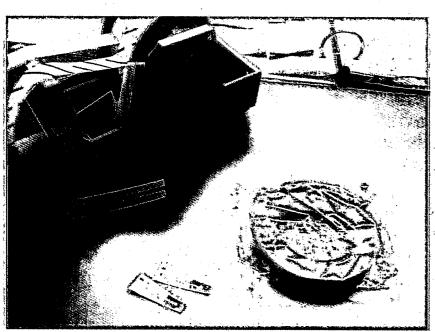


Photo of one 1-gallon storage hazardous waste storage container of waste stain (marked per the DOT requirements, marked with the 03/28/2011 date of accumulation, and marked with the words "Hazardous Waste") located at the Hazardous Waste Storage Area. Photo taken facing east.

Photo 7

Michael J. Martin

St. John's May 4, 2011

Photo of 3M 1228 indicator tape (on the dispensing unit), 3M 1248 chemical indicator strips, two 3M Comply 1243 integrators, and one roll of 3M Comply 1222 indicator tape located at Central Sterile. Photo taken facing east.

Photo 8

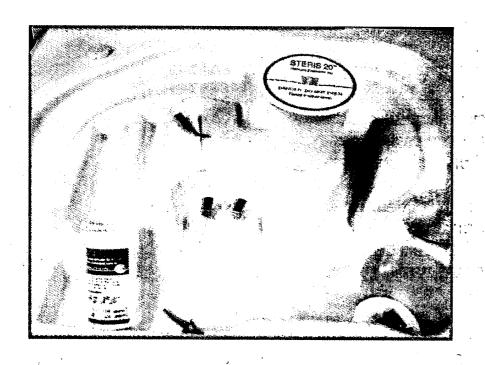
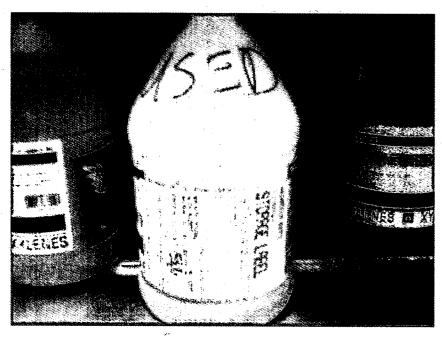


Photo of Steris LCC008 indicator strips (bottom) and Steris 20 Concentrate (top) located at Central Sterile. Photo taken facing east.

Photo 9

Michael J. Martin



St. John's May 4, 2011

Photo of one 1-gallon hazardous waste satellite accumulation container of waste stain located at the Histology Lab. Photo taken facing south.

Photo 10

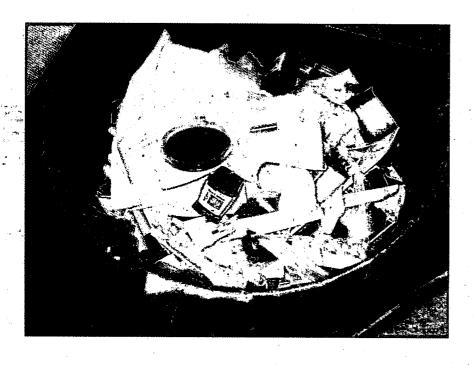


Photo of Spectra MRSA waste (agar plates) and Xpert MRSA waste (blue cartridges) stored in the biohazardous waste storage container located at the Microbiology Lab. Photo taken facing north.

Photo 11

Michael J. Martin



St. John's May 4, 2011

Same image as Photo #11. Photo taken facing north.

Photo 12

Michael J. Martin www

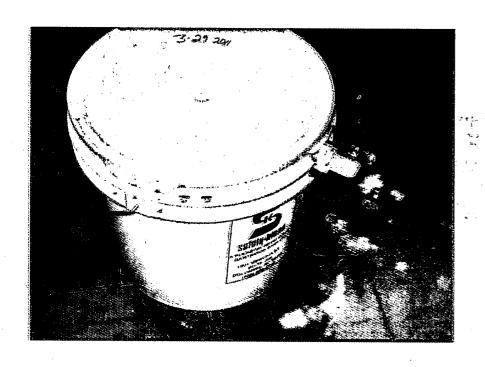
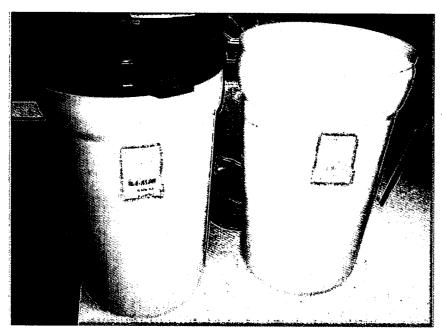


Photo of one silver recovery unit located at the Radiology Department (Dark Room). Photo taken facing south.

Photo 13

Michael J. Martin



St. John's May 4, 2011

Photo of two 55-gallon storage containers of medical film located at the Radiology Lab. Photo taken facing south.

Photo 14

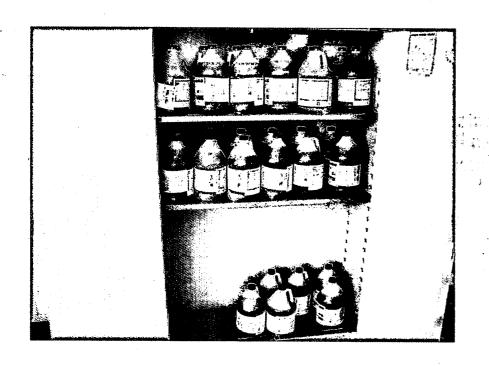
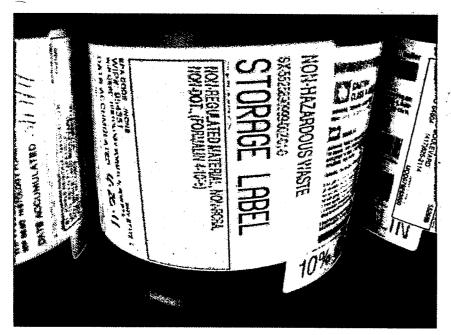


Photo of 29 one gallon storage containers of waste formalin located at the Shipping Dock. Photo taken facing north.

Photo 15

Michael J. Martin



St. John's May 4, 2011

Same image as Photo #15.. Photo taken facing north.

Photo 16

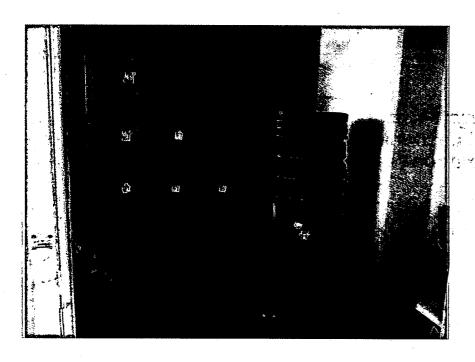
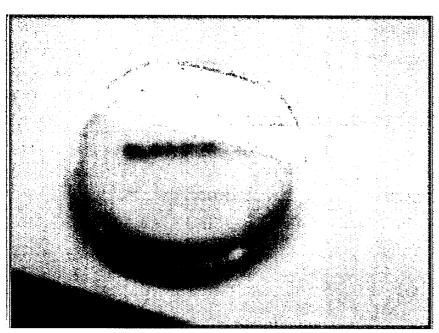


Photo of biohazardous waste storage containers located at the Shipping Dock. Photo taken facing north.

Photo 17

Michael J. Martin www



St. John's May 5, 2011

Photo of one agar plate (Spectra MRSA method) located at the Microbiology Lab. Photo taken facing north.

Photo 18

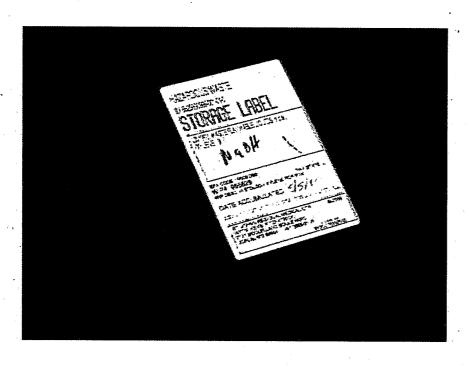
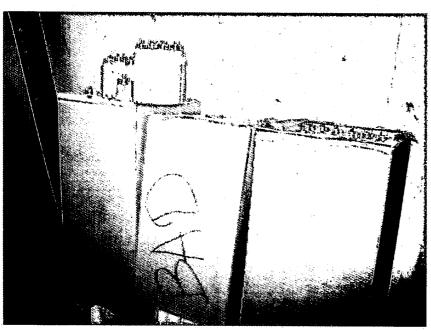


Photo of the hazardous waste label located on the biohazardous waste storage container (Spectra MRSA waste and Xpert MRSA waste) located at the Microbiology Lab. Photo taken facing north.

Photo 19

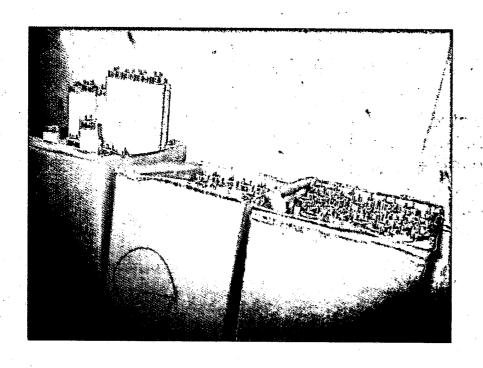
Michael J. Martin



St. John's May 5, 2011

Photo of three open boxes of 114 universal waste-lamps located at the Universal Waste Storage Area (Electrical Closet). Photo taken facing south.

Photo 20



Same image as Photo #20. Photo taken facing north.

Photo 21

Michael J. Martin



St. John's May 5, 2011

Photo of one open box of 33 universal waste-lamps located at the Universal Waste Storage Area (Electrical Closet). Photo taken facing south.

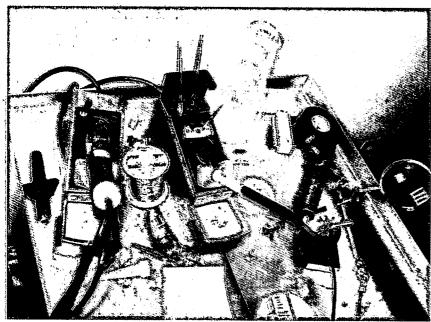
Photo 22



Photo of one open box of 30 universal waste-lamps located at the Universal Waste Storage Area (Electrical Closet). Photo taken facing south.

Photo 23

Michael J. Martin WV



St. John's May 5, 2011

Photo of two soldering gun units (with sponges) located at the Biomedical Services Department. Photo taken facing west.

Photo 24

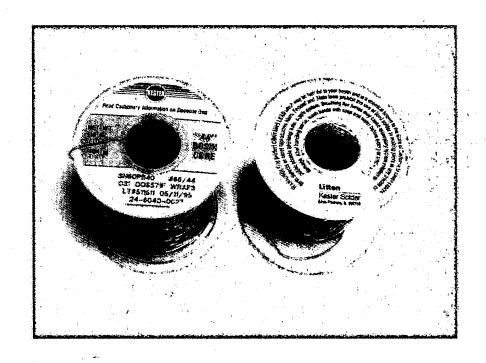
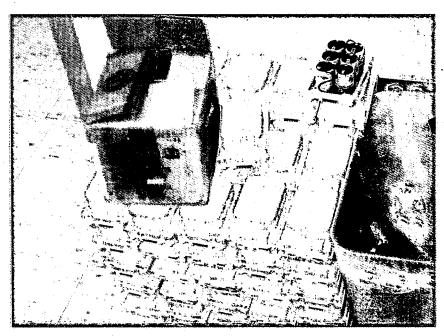


Photo of two rolls of lead solder located at the Biomedical Services Department. Photo taken facing west.

Photo 25

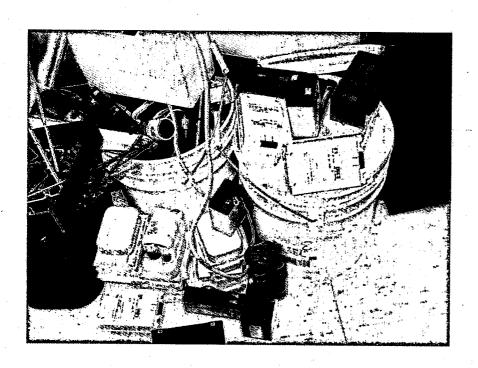
Michael J. Martin Wh



St. John's May 5, 2011

Photo of alkaline batteries located at the Biomedical Services Department. Photo taken facing west.

Photo 26



> Photo of lead-acid batteries located at the Biomedical Services Department. Photo taken facing west.

Photo 27